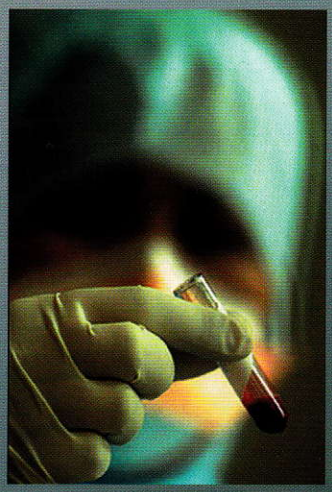
مجلة المجلس العربي للاختصاصات الطبية

JABMS

VOL.9, NO.1, 2008

ISSN 1561-0217

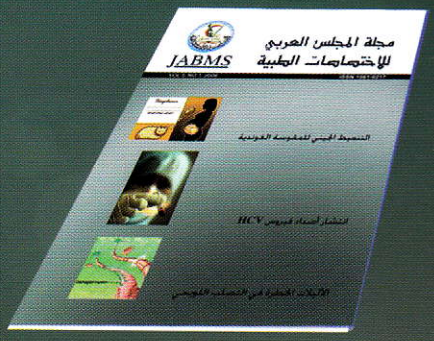
التنميط الجيني للمقوسة الغوندية

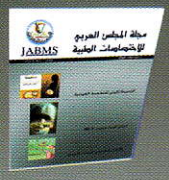


انتشار أضداد فيروس HCV

الأليلات الخطرة في التصلب اللويحي

للدعاية الطبية: الإتصال بمكتب المجلة





Journal of The Arab Board of Medical Specializations

A Medical Journal Encompassing All Medical Specializations
Issued Quarterly

The Journal of The Arab Board Of Medical Specializations is a medical journal, issued quarterly, encompassing all medical specializations. It will strive to publish the research of Arab physicians in order to strengthen the communication and exchange of scientific, and medical information withen the Arab World. *The Journal* will also publish the activities and news of the Arab Board of Medical Specializations.

The Journal of the Arab Board of Medical Specializations will publish Original Articles, Reviews, Case Reports, and Letters to the Editor, either in English or in Arabic, accompanied by a summary in the second language.

The Journal will publish selected important medical abstracts which have recently been accepted for publication elsewhere, these will be translated into Arabic to facilitate communication.

All articles will be reviewed by the Chair persons of the scientific councils of the Arab Board of Medical Specializations in cooperation with the members of these boards and with professors and specialists from the Arab countries and abroad.

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Requirements for Authors Submitting Manuscripts to the Journal of the Arab Board of Medical Specializations

N.B. These requirements are adapted from the "Uniform Requirements for Manuscripts (URM) Submitted to Biomedical Journals by the International Committee of Medical Editors." The complete text is available at http://www.icmje.org/

1. Manuscripts should report original work that has not been published elsewhere either in print or in electronic form. Work that has been presented at a professional meeting is eligible for consideration for publication.
2. All manuscripts received by the *Journal* are submitted to a double blind review by a number of peers in addition to consideration by the editorial staff. Manuscripts are accepted, returned to the author for revision, or rejected on the basis of these reviews.
3. Manuscripts may be submitted either in Arabic or in English. The title page and abstract should be submitted in both languages. Arabic numbers should be used in all articles, regardless of language, (*i.e*
4. Arabic terminology should be standardized according to the United Medical Dictionary. Available at: http://www.emro.who.int/umd/ or http://www.emro.who.int/ahsn
5. The right of the patient to privacy must be respected. Identifying information should be omitted unless it is essential. Informed consent should be obtained from the patient when it is not possible to achieve anonymity in photographs or other information. When informed consent has been obtained it should be indicated in the published article.
6. All authors should be listed. Each author must have participated in the work. One or two authors should take responsibility for correspondence about the work.
7. A summary of technical requirements follows.

- Manuscripts should be double spaced in entirety with each section on a new page. Do not use both sides of the paper. Number pages consecutively from the first page to the last in the following sequence: title page, abstract and key words, text, acknowledgments, references, tables, and legends. Illustrations and unmounted prints should be no larger than 203 x 254 mm (8 x 10 inches). Leave margins of at least 25 mm (1 inch) on each side. All manuscripts should be submitted on IBM compatible diskettes. The original typed manuscript plus 3 additional copies should be submitted. Alternatively, the manuscript may be submitted by e-mail (jabms@scs-net.org) if it is technically feasible. The authors should maintain copies of all material submitted.
- Each experimental manuscript should include an abstract in both English and Arabic. The abstract should be structured as follows: Objective, Methods, Results, Conclusion and should contain no more than 250 words. Three to ten key words must be provided after the abstract
- Research articles should not exceed 4000 words (not including references) and each should be divided into sections as follows: Introduction, Methods, Results, Discussion, and Conclusion. The authors should identify methods (the study group must be well specified and justified), any apparatus used (giving the manufacturer's name and address in parentheses) and procedures to permit reproducibility of the results. Statistical methods should be included with enough data to permit independent verification of the reported results. When data are summarized in the Results section the statistical methods used to analyze them should be specified. Any drugs and chemicals used should include generic names, doses, and routes of administration. Tables and figures should be used to explain and support the premise of the paper. Use graphs as an alternative to tables with many entries. Do not duplicate data in graphs and tables. The number of tables and graphs should be appropriate to the length of the manuscript. It is preferable not to submit more than 6 tables. The Discussion section should include the important aspects of the study and conclusions. The implications of the findings and their limitations should be included. Observations should be related to other relevant studies. Avoid unqualified statements and conclusions that are not supported by the data. Recommendations should be included when relevant.
- Review articles must not exceed 6000 words (not including references). The structure of the manuscript may be adapted to the material being reviewed.
- Case Reports about unusual clinical cases will be received. A brief, unstructured abstract should be included.
- Educational and unusual medical images for publication are welcomed.
- Use only standard abbreviations. Avoid abbreviations in the title and abstract. The full term for which an abbreviation stands should precede its first use in the text unless it is a standard unit of measurement.
- Measurements of length, height, weight, and volume should be reported in metric units (meter, kilogram, or liter) or their decimal multiples. Temperatures should be given in degrees Celsius. Blood pressures should be given in millimeters of mercury. All hematologic and clinical chemistry measurements should be reported in the metric system in terms of the International System of Units (SI).
- Acknowledgements may be given to those providing technical help. Financial and material support should be noted.
- References should be numbered consecutively in the order in which they are cited in the text. References cited only in tables or figures should be numbered in accordance with the sequence established by the mention in the text of the particular table or figure. References should include the most current information. Titles of journals should be abbreviated according to that used by the *Index Medicus*. (This list can be obtained from the following web site: http://www.nlm.nih.gov/). Sufficient data must be included with each reference cited to permit any reader to locate the primary source easily, *e.g.* (1) journal: author, title of article, journal, year, volume, page; (2) book: author, editor, publisher and place of publication, organization, chapter, page. For further details concerning citing conference proceedings, papers, organizations, scientific or technical reports, dissertations, newspaper articles, etc. consult the URM Submitted to Biomedical Journals. *The author is responsible for the accuracy of the references. Manuscripts without acceptable references cannot be published and will be returned to the authors for completion.*

8. *Articles that do not meet the technical requirements of the* Journal *will not be submitted for review unless they are revised.*

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ORIGINAL ARTICLES

CASE REPORT

كلمة التحرير

Editorial

الأستاذ الدكتور خليل ابراهيم قائد

الأمين العام للمجلس العربي للاختصاصات الطبية

المسيرة مستمرة

تستأنف مجلة المجلس العربي للاختصاصات الطبية صدورها بعد توقفٍ دام بعض الوقت لظروف خارجة عن إرادتنا، وهاهي تستأنف مسيرتها ثانيةً بعون الله.

بهذه المناسبة تنتهز هيئة التحرير الفرصة لتتقدم بالشكر والتقدير إلى مؤسس المجلة الأستاذ الدكتور مفيد الجوخدار، الأمين العام السابق للمجلس العربي للاختصاصات الطبية رئيس هيئة تحرير المجلة، الذي أعطى الكثير من جهده وخبرته في مرحلة إنشاء المجلة، وفي مرحلة استمراريتها وتطورها، فقد تابع نمو ما زرع إلى أن أينعت النبتة واشتد عودها، وأصبحت معلما بين نظيراتها من المجلات الطبية التي تصدر في العالم العربي، وكان لسعادته دور في أن تصبح المجلة حاضنة لمقالات تعتمد ترقية الهيئة التدريسية لكليات الطب في بعض الدول العربية.

تتقدم هيئة التحرير بالشكر أيضاً إلى طاقم التحرير السابق متمثلاً في الأستاذة الدكتورة رائدة الخاني التي أعطت الكثير من الجهد والوقت للمجلة حتى وصلت إلى ما هي عليه، ولكن ارتباطها في العمل الأكاديمي والعملي حال دون استمراريتها مع هيئة تحرير المجلة، والشكر إلى الدكتورة كارول فورسايث هيوز مستشارة التحرير لدورها المتميز في الصياغة والإعداد اللغوي والتحكيم وغيرها من الأعمال المتعلقة بالمجلة.

الشكر موصول أيضاً إلى الكوكبة المتميزة من الأطباء الذين لايضنون على المجلة جهودهم في تقييم المقالات، ولا يبخلون بآرائهم القيمة في إبراز الجوانب الإيجابية منها، ونتمنى أن يستمروا في دعم المجلة من خلال تشجيع زملاء لهم في المجالات الطبية التخصصية المختلفة للانضمام إلى باقة المحكمين دعما لاستمرارية المجلة.

إن هيئة التحرير ترحب بالآراء والمقترحات البناءة التي تنشد الارتقاء بسوية المجلة ومحتوياتها، وبدعمكم ستستمر المجلة في الصدور بانتظام إن شاء الله.

Letter from the Editor

رسالة من المحرر

الأستاذ الدكتور محمد هشام السباعي
الأمين العام المساعد للمجلس العربي للاختصاصات الطبية

It gives me great pleasure to announce the resumption of publication of the journal of the Arab Board of Medical Specializations. The journal was not published during the last year because of some logistic problems and because of the change in the Secretariat General and the editorial Board.

Now after we have overcome all the difficulties in resuming the publication of the journal, we feel very proud to announce its publication. We made some modifications and we hope that these modifications were done correctly.

The aim of this Journal is to publish papers containing new research results, clearly written and of interest to appreciable number of readers. Although referees make the recommendations for acceptance or rejection of papers, the final decision rests with the Editor. The Editor holds the responsibility for the quality of accepted papers. By acting as a liaison between the authors and the Arab Board, the Editor assists the Arab Board in maintaining cordial relations with the authors.

The Criteria for publication are:

1- Papers must be correct.

2- Papers must be of interest to an appreciable number of readers.

3- Papers must be written clearly.

To be able to reach our goals, we look forward to hear from our readers any criticism, comments or suggestions how to improve on this Journal.

It is in our mind that the Editorial Board should not be limited to the Chairmen of the scientific councils or their deputies, but it should include Experts in the Arab world and also International Experts. Taking such a step will enable us to improve further on our Journal. The Arab Board Journal is recognized by many Academic Institutions in the Arab World for Academic Promotions; however our ultimate goal is to have this Journal internationally recognized, when it becomes a fully indexed medical Journal.

As the reader will notice this issue includes about 40 abstracts with their Arabic translations, we try our best to cover many specialties with abstracts. The Idea of publishing Abstracts is to stimulate interested readers to look for the original articles using the Internet and also to provide them with some ideas to initiate some research in their respective institutions.

The reader will also notice that some activities of the Arab Board of Medical Specializations are covered in this issue. It goes without saying, that we welcome all contributions provided they follow the Arab Board Journal style.

It is also important to mention that each article is going to be reviewed by two referees before it is accepted for publication, this may delay the publication of the article, but without this review we cannot consider ourselves a professional Journal.

Last but not least I would like to extend my thanks and appreciation to Professor Moufid Al-Joukhadar former Secretary General of Arab Board and Editor in-chief, Dr Raydah Al-Khani the former Co-Editor of the Journal and to Mrs. Carol Forsyth Hughes the former Editorial Advisor and to all those, who were involved in the publication of this Journal and left the Journal.

Many thanks to Professor Faisal Radi Al-Moussawi, President of the Higher Council of the Arab Board and Professor Khalil Al-Qqyed, Secretary General of the Arab Board For trusting me with this mission. May thanks to the Editorial team of this Journal, wishing everybody good health and prosperous life.

Professor M.Hisham Al-Sibai
Editor-in-chief

History of Medicene

Original Article موضوع أصيل

PREVALENCE OF HEPATITIS C VIRUS ANTIBODIES AMONG HEALTH CARE WORKERS IN BAGHDAD, IRAQ

انتشار أضداد التهاب الكبد الفيروسي C بين العاملين الصحيين في بغداد، العراق

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ABSTRACT

Objective: *There are several reports on the occupational risk of hepatitis C virus infection of health care workers (HCWs) by accidental inoculation of infected blood. This study was carried out to determine the prevalence of anti-HCV among a sample of Iraqi HCWs.*

Methods: *A total of 1656 HCWs selected from various hospitals and medical units in Baghdad, together with 238 "apparently" healthy subjects (controls) were tested for anti-HCV from June 1995 to April 1998. Serum testing was carried out by a third generation of enzyme immunoassay (EIA) for screening for anti-HCV and a third generation recombinant immunoblot assay (RIA-111) for confirmation of the presence of HCV antibodies.*

Results: *A higher rate of anti-HCV (1.51%) was observed among HCWs than controls (0.84%). The highest prevalence rate of anti-HCV was detected in the renal dialysis group (6.25%) followed by the dentistry group (4.26%). These were the only groups having a statistically significant higher prevalence of anti-HCV than controls when each group was compared with controls. An increase in the prevalence of anti-HCV with duration of professional practice was demonstrated. The highest rate of anti-HCV was detected among HCWs in cardiovascular surgery hospitals (4.21%) followed by infectious disease hospitals (3.37%).*

Conclusion: *Efforts to reduce exposure to blood and other body fluids are needed to reduce the risk of the occupational transmission of HCV infection, as no vaccine against HCV infection is available yet.*

ملخص البحث

خلفية وهدف الدراسة: هناك عدة تقارير حول خطورة الإصابة بعدوى التهاب الكبد الفيروسي نمط C بين العاملين في القطاع الصحي بسبب تعرضهم للدم الموبوء (المخموج). هذا البحث يسلط الضوء على انتشار أضداد فيروس التهاب الكبد نمط C (anti-HCV) بين مجموعة من العاملين في القطاع الصحي في العراق.

طريقة الدراسة: ضمت الدراسة 1656 عاملاً صحياً تم اختيارهم من عدة مشافي ووحدات طبية في بغداد، مع 238 شخصاً بصحة جيدة (مجموعة الشاهد). أجريت الدراسة بين 1995/6 و1998/4، وتم تحري وجود anti-HCV عند المجموعتين بتقنية الجيل الثالث من المقايسة المناعية الأنزيمية (EIA) والجيل الثالث من مقايسة اللطخة المناعية المأشوبة (RIA-111)، لتأكيد وجود أضداد HCV.

النتائج: كانت نسبة انتشار anti-HCV بين العاملين الصحيين (1.51%) أعلى منها في مجموعة الشاهد (0.84%). وكانت أعلى نسبة من حاملي anti-HCV بين العاملين في الكلية الاصطناعية (6.25%) تليها مجموعة العاملين في مجال طب الأسنان (4.26%) وهما المجموعتان اللتان أظهرتا فروقاً إحصائية هامة عند مقارنة كل مجموعة على حدة مع مجموعة الشاهد. وكانت هناك زيادة ملحوظة في نسبة حاملي anti-HCV مع مدة الممارسة المهنية. وفي المستشفيات كانت أعلى نسبة لحاملي anti-HCV في مستشفيات جراحة القلب (4.21%) تليها مستشفيات الأمراض العدوائية (3.37%)

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الخلاصة: يجب بذل جهود لمنع التعرض للدم أو سوائل الجسم الأخرى لتقليل خطر الإصابة بفيروس التهاب الكبد الفيروسي نمط C حيث لا يوجد لقاح فعال لهذا النمط حتى الان.

INTRODUCTION

Health care workers (HCWs) are at risk of infection by blood borne viruses through needle stick injuries and other exposure to blood. There have been several reports on the occupational risk of hepatitis C virus (HCV) infection of HCWs by accidental inoculation of infected blood.[1-4] Serological testing of HCWs who have had proved percutaneous exposures to anti-HCV positive needle stick inoculations revealed by detection of anti-HCV that they seroconvert at a frequency of 0 to 4%.[5-7] The frequency of HCV infection by needle stick inoculation from an HCV positive source have been estimated to be 10%, by detection of HCV ribonucleic acid (RNA) in the recipient.[4] The risk of HCV infection in the HCWs is substantially below the approximately 15% risk of exposure to hepatitis B virus (HBV) in HCWs.[8]

In Iraq, many studies have been carried out to study the prevalence of anti-HCV among blood donors and certain risk groups.[9-15] The study of Kadir *et al*[12] determined the prevalence of anti-HCV among health workers in Al-Tameem governerate. This study was carried out, therefore, to determine the prevalence of anti-HCV among a sample of Iraqi HCWs and to elucidate the effect of various health professions, duration of professional practice and the practice in different hospitals on exposure to HCV.

METHODS

A total of 1656 HCWs selected from various hospitals and medical units in Baghdad, together with 238 apparently "healthy" subjects (controls) were tested for anti-HCV from June 1995 to April 1998. Serum testing was carried out at the Central Public Health Laboratory, Baghdad by a third generation enzyme immunosorbent assay (EIA) for screening for anti-HCV and a third generation recombinant immunoblot assay (RIA 111) for confirmation of the presence of HCV antibodies using the commercially available kits. HCWs with less than six months of professional practice were excluded from the study. Subjects were divided into seven professional groups as follows: renal dialysis group (physicians, nurses and medical technicians), surgery group (surgeons, gynecologists, nurses and medical technicians working in surgical and gynaecological wards), dentistry group (dentists and technicians), laboratory group (specialists and technicians), blood bank group (physicians and medical technicians), internal medicine group (physicians, nurses, and medical technicians working in internal medicine and pediatric wards and intensive care units), and an other professions group (personnel working in administration, the x-ray department, pharmacies, catering departments, technical services, and cleaning services). The controls were selected from the teaching staff and students of primary and secondary schools who had never worked in hospitals or other health care units. A questionnaire form was completed for each subject by direct interview. The data requested included age, sex, health care profession, duration of professional practice and work in the hospital or unit. The age range of HCWs was 16-65 years with a mean of 36.8 $\pm$ 12.4 years and a male: female ratio of 0.83:1, while that of controls was 16-67 years with a mean of 38.2 $\pm$ 12.8 years and a male: female ratio of 0.78:1. Chi square (Yate's correction), odds ratio (OR), and 95% confidence interval (CI) were calculated for statistical analysis. *P* values less than 0.05 were considered as statistically significant.

RESULTS

A higher rate of anti-HCV (1.51%) was observed among HCWs than controls (0.84%), which was of no statistical significance. The highest prevalence rate of anti-HCV was detected in the renal dialysis group (6.25%) followed by the dentistry group (4.26%). These were the only groups having a statistically significant higher prevalence of anti-HCV than controls when each group was compared with the controls with regard to calculated OR and 95% CI. The internal medicine group had a nearly equal prevalence rate (0.88%) to that of the controls. None of the last (other professions) group had antibodies to HCV. These findings are shown in Table 1.

An increase in the prevalence of anti-HCV with duration of professional practice was demonstrated although it was of no statistical significance ($P > 0.05$); however, the frequency of anti-HCV was more than four times higher in HCWs having more than twenty years duration of professional practice than those with less than one year duration of practice. These results are shown in Table 2.

The highest rate of anti-HCV was detected among HCWs in cardiovascular surgery hospitals (4.21%), followed by infectious disease hospitals (3.37%), while the lowest rate was detected among HCWs working in pediatric hospitals (1.05%). However, these variations in the prevalence of anti-HCV among HCWs of different hospitals were of no statistical significance. These findings are shown in Table 3.

DISCUSSION

The current measures in place to control the exposure of HCWs in Baghdad are by rigorous screening of blood for HCV in addition to the use of disposable syringes and transfusion sets along with other hygienic measures. The prevalence of anti-HCV among HCWs in Baghdad revealed by this study (1.51%) was twice that among controls (0.84%). This is in contrast to a study of health workers in Al-Tameem, Iraq, which revealed that none had

Professional group	No. tested	Age (Years)	Anti-HCV positivity	
			No. (%)	OR(95% CI)
Renal dialysis group	45	37.3±10.4	3 (6.25)	7.8 (1.3-48)
Surgery group	615	38.2±7.5	9 (1.46)	1.7 (0.4-8.2)
Dentistry group	94	36.2±11.6	4 (4.26)	5.2 (1-29)
Laboratory group	134	36.1±10.4	3 (2.24)	2.7 (0.4-16.4)
Blood bank group	75	37.5±10.6	2 (2.67)	3.2 (0.4-23.3)
Internal medicine group	457	37.9±7.0	4 (0.88)	1.0 (0.2-5.7)
Other professions group	233	37.0±10.1	0 (0.0)	
Total HCWs	1656	36.8±12.4	25 (1.51)	1.8 (0.4-7.6)
Controls	238	38.2±12.8	2 (0.84)	

Table 1. Prevalence of anti-HCV among various professional groups of HCWs with their average ages (mean ± SD).

Duration of professional practice (years)	No. tested	Anti-HCV positivity No. (%)
<1	156	1 (0.64)
1 5	368	3 (0.82)
6 - 10	223	3 (1.34)
11 15	300	5 (1.67)
16 20	321	5 (1.56)
≥ 21	288	8 (2.78)

Table 2. Prevalence of anti-HCV among HCW in relation to duration of professional practice.

Hospital	No. tested	Anti-HCV positivity No. (%)
Cardio-vascular surgery hospitals	95	4 (4.21)
Infectious diseases hospitals	89	3 (3.37)
Neuro-surgery hospitals	76	2 (2.63)
Gynaeco-Obstetric hospitals	178	3 (1.69)
General hospitals	545	6 (1.10)
Pediatric hospitals	190	2 (1.05)

Table 3. Prevalence of anti-HCV among HCWs at different hospitals.

antibodies to HCV compared with a 0.01% seroprevalence among blood donor controls.[12] Studies in the Middle East and other parts of the world have also revealed a higher prevalence of anti-HCV among HCWs than among controls or blood donors, 1.9% among medical staff in Saudi Arabia,[16] 3% among HCWs in Syria,[17] 2% among dentists in USA,[18] 0.58% among hospital staff in Germany,[19] 1.2% and 0.85% among Italian HCWs,[20,21] and 0.6% among HCWs in France.[22] However, in the UK, a study revealed that none of a group of dental surgeons had anti-HCV compared with a 0.3% seroprevalence among blood donors,[23] while another study revealed that 0.28% of HCWs had anti-HCV which was not higher than that found among blood donors.[24] The relatively low prevalence of anti-HCV among HCWs in comparison with HBV markers may be due to the low prevalence of anti-HCV among the normal population in comparison with that of HBV markers, the very low level of viraemia associated with hepatitis C,[8,25] and the resultant low risk of infection among HCWs.

HCWs working in renal dialysis and dentistry units represented the highest risk groups of exposure to HCV infection, and those of blood bank, laboratory and surgery groups were also at risk of exposure but to a lesser extent. These variations in the prevalence rates of anti-HCV among various professional groups could not be attributed to age differences as their average ages had slight variations, but were most likely the result of variations in the frequency and intensity of their occupational exposure to blood and blood products. Niu *et al*[26] detected an association between anti-HCV positivity and increased duration of dialysis, which may reflect the accumulative exposure to infectious blood. A study in New Zealand found a high frequency of HCV viremia in patients with a history of repeated exposure to blood and blood products based on detection HCV RNA.[27] Also, high rates of anti-HCV among hemodialysis staff,[17,26,28] dentists,[18] laboratory technicians,[29] and surgeons[30] were reported. Reports of HCV transmission following needle stick injuries from HCV positive patients have been described among surgeons,[5] and hemodialysis staff.[31]

The increased prevalence of HCV infection among HCWs with increasing duration of professional practice demonstrated in this study may be attributed to the increased risk of frequent and accidental exposure of HCWs to blood and blood products. A similar finding has been reported in other countries.[16,18,26,32] Other workers have also detected an increased prevalence of anti-HCV with advancing age of HCWs.[3,24]

The risk of exposure to HCV appears to be higher among HCWs working in cardiovascular surgery hospitals and to a lesser degree in infectious disease and neurosurgery hospitals, which may be due to variations in their increased risk of exposure to blood and other body fluids and contact with patients.

CONCLUSION

The results of this study indicate that from our experience with HBV there is a relatively low continuing risk of exposure of HCWs to HCV. Efforts to reduce exposure to blood and other body fluids are the best ways to reduce the risk of occupational transmission of HCV, as no vaccine against HCV infection is available yet.

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Original Article

موضوع أصيل

QUALITY OF LIFE OF PATIENTS ON HEMODIALYSIS

نوعية الحياة عند مرضى الدِّيال الدموي

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ABSTRACT

Objective: *The measurement of health related quality of life yields important information about patients' health, helps to assess treatment effectiveness, and may also identify those patients who need special care because of their increased risk of death and hospitalization. The aim of the study is to examine the lifestyle of patients with renal failure (on hemodialysis) as a pre-requisite to designing a future health care program.*

Methods: *A consecutive sample of 90 patients was pooled from all the hemodialysis centers in Baghdad, Iraq. Several aspects reflecting quality of life were studied through an interview.*

Results: *Only 32% of the patients studied were able to work; 68% were anxious; 34% possessed an aggressive attitude; 76% felt sad; 59% hated themselves; 96% had good relations with their parents, while 60% had poor relations with friends. With respect to the marital relationship, 66% claimed that they had a good marital relationship; 34% said that they had an acceptable one. Sexual relationship was good in 19%, acceptable in 19% and bad in 62%. With regard to meals, 74% were eating with their families and 62% were restricting food.*

Conclusion: *Hemodialysis patients have significant changes in quality of life that are imposed on them due to their chronic disease and partial disability.*

ملخص البحث

خلفية وهدف الدراسة: إن قياس نوعية الحياة المتعلقة بالجانب الصحي يعطي معلومات مهمة تساعد في تقدير الحالة الصحية للمريض وفاعلية العلاج إضافة إلى تحديد المرضى الذين هم بحاجة إلى عناية خاصة لتقليل الوفيات وعدد مرات دخول المستشفى. تهدف الدراسة إلى إلقاء الضوء على نوعية حياة المرضى المصابين بفشل كلوي مزمن كبداية لوضع برنامج صحي ملائم لهم.

طريقة الدراسة: أجريت الدراسة على عينة من 90 مريضاً من المرضى الخاضعين للديال الدموي في مستشفيات مدينة بغداد، وتم جمع معلومات عن جوانب مختلفة من حياتهم عن طريق المقابلة المباشرة.

النتائج: كان 32% فقط من المرضى قادرين على العمل، وكان 68% منهم قلقين، وكان لدى 34% منهم مزاج متشنّج، و76% منهم يشعرون بالحزن، و59% منهم يكرهون أنفسهم. كان لدى 96% من المرضى علاقات جيّدة بأهلهم، بينما 60% منهم كانت لهم علاقات ضعيفة بالأصدقاء. ذكر 66% من المرضى أنهم يعيشون حياة زوجيّة سعيدة، وكانت العلاقة الزوجيّة جيّدة في19% من الحالات، ومقبولة في 19%، وسيّئة في 62% منها، أما بالنسبة للوجبات فقد اعتاد 74% من المرضى على تناول الطعام مع أسرهم في حين تحدد تناول الغذاء عند 62% من المرضى.

الخلاصة: يعيش المرضى الموضوعين على الدِّيال الدموي نوعية حياة خاصّة يفرضها عليهم مرضهم المزمن وعجزهم الجزئي.

INTRODUCTION

The incidence and prevalence of end stage renal failure have increased greatly all over the world over the last 2 decades.[1] In the UK, 93 new patients per million were dialyzed in 2001. In the US, 336 new

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patients per million are added each year. A dialysis patient in the US costs $34000 per year (as an outpatient) or $77000 including hospital admissions. In the UK, total costs for elderly dialysis patients are Approximately £22000 per year[2]. Early referral to renal care specialists potentially may reduce the economic impact of chronic renal disease before and after the initiation of renal replacement therapy and may, at the same time, reduce morbidity and mortality rates.[3]

End stage renal diseases and their treatment cause major alteration in the lifestyle of most patients who may encounter frustration in all areas of life including dietary and fluid intake restrictions. As a considerable proportion of the social lives of humans revolves around eating and drinking, restricted social participation is almost inevitable for these patients. Another alteration in lifestyle includes the probable loss of financial security resulting from lower productivity and income and possible unemployment.[4]

The aim of the study was to study the effects of chronic hemodialysis on Iraqi patients with regard to physical, social, psychological, spiritual and religious factors and to measure the impact on quality of life in these patients.

METHODS

Setting. The study was conducted during the period from June through December 2005 in all of the six hemodialysis centers in Baghdad, Iraq.

Design. This was a cross-sectional study, with an analytic element.

Sampling. The sample was chosen consecutively by pooling all the patients who were regularly attending the main six hospitals in Baghdad (Yarmook, Medical City, Karama, Kadhimiya, Kindy and Al Hakeem). These hospitals are the only centers that have dialysis units. The patients were from different geographical areas, social groups, educational levels, and environmental situations. An interview was constructed and administered by the authors. It included general information, history of the disease, personal habits, level of independence, and special questions designed to elicit feelings, complaints, relationships, and other details related to the physical, psychological, social, spiritual aspects of quality of life.

The data are presented as numbers and percentages; the chi square test was used to measure statistical significance. P value of < 0.05 indicated the level of significance.

RESULTS

The ages of the patients ranged from 20-75 years; 50% of them were between 30-49 years of age. The gender distribution was almost equal among all age groups.

Physical domain. Eighty three percent of the sample was able to walk; 50% walked for enjoyment; and 19% walked to work. Sixty two percent of the sample could not climb stairs; 64% felt fatigue after doing housework. More than 80% complained of disturbed sleep; 71% had muscle cramps; 77% complained of pruritus; 82% had pain in the extremities, while 44% had pain in the whole body. Regarding working capacity, only 32% of the sample was able to work. Table 1.

Physical domain	No	%
Exercise		
Ability to walk	75	83
Walking for enjoyment	45	50
Walking to work	17	19
For those who walk:		
Walking for <2hr	63	84
Walking for >2hr	12	16
Ability to work	24	32
Sleep		
Disturbed sleep	75	83
Complaining of insomnia	77	86
Daytime sleepiness	44	49
Waking early	78	87
Physical complaints		
Muscle cramps	64	71
Anorexia	48	53
Shortness of breath	62	69
Fainting or dizziness	53	59
Pruritus	69	77
Headache	54	60
Bad odor from the mouth	58	64
Pain in the lower extremities	74	82
Pain in the whole body	40	44

Table 1. Physical factors.

Psychological domain. Sixty eight percent of the patients were anxious; 34% noted aggressive attitude; 76% felt sad, 59% hated themselves, 21% were overly

suspicious; and 58% reported crying frequently (Table 2).

Complaint	Number	Percentage
Anxiety	61	68
Aggressive attitude	31	34
Sadness	68	76
Self hatred	53	59
Over suspiciousness	19	21
Frequent crying	52	58

Table 2. Psychological domain.

Self esteem and confidence. Forty seven percent of the patients continued to work in spite of their illness; 31% agreed that they had lost their role in the family; 89% accepted their illness and 94% had begun to feel more friendly and sympathetic to other patients.

Social aspects. The results showed that 96% of the patients had good relations with their parents; 60% had poor relations with friends in spite of the fact that 74%. had time for socializing. Some (27%) of the patients were afraid to socialize with others, and 89% had restrictions in time and place for leisure but the desire for enjoyment was present in 54% of the patients. Participation in social activities was highest (78%) at ages from 40-49 years and higher in males (64%) than in females (58%). Regarding the marital relationship, 66% claimed that they had a good marital relationship and 34% said that they had an acceptable one. Sexual relations were good in 19%, acceptable in 19%, and bad in 62% (Table 3).

Table 4 shows some of the spiritual and religious beliefs; 97% of the patients agreed that the disease is a test from God and 86% of them had acquired an acceptance of the illness.

Regarding the eating behavior of the patients, most ate with the family (74%); those who were restricting food accounted for 62%. Only 4% needed help during eating.

There was a strong association between food restriction and duration of dialysis (χ^2=16.257, P<0.01); it was greater in patients who had undergone hemodialysis for less than 3 years.

Disturbed patterns of sleep were more prominent in the age group 20-29 years, greater in females (89%) than males, and more in the single (86%) than married, but the association was not statistically significant.

In addition, there was a strong association between disturbed sleep and duration of dialysis (χ^2=13.93 P<0.01), especially in those who had undergone dialysis for more than 6 years (92%). Table 5

The results also revealed that 89% of patients in the age group 20-29 years were in need of financial support from their families, with a noticeable difference between the two genders; 44% of the males versus 82% of the females needed financial support, and there was a highly significant association for both (χ^2=17.19, P<0.01) (χ^2=13.83, P<0.01) respectively (Table 6).

Social domain	Yes		No	
	No.	%	No.	%
Relation with the family				
G Good relation with parents if living	84	96	2	4
Good relation with sisters and brothers	80	89	10	11
Enjoy friendships	68	76	22	24
Have poor relations with friends	54	60	36	40
Afraid to socialize with others	24	27	66	73
Afraid of relations with other gender	26	29	64	71
Leisure time and enjoyment				
Restricted time and place for leisure	80	89	10	11
Only with the family	59	66	31	34
Participate in social activities	55	61	35	39

Marital and sexual relationship	Good		Acceptable		Bad		
	No.	%	No.	%	No.	%	
Marital relationship	41	66	21	34	0	0	Total 62
Sexual relationship	12	19	12	19	38	62	

Table 3. Social factors.

Spirit Spiritual and religious attitude	No	%
Think life is worthless	44	49
Think life is meaningless	44	49
No desire to live longer	28	31
Death is the solution	22	24
Thinking why me?	46	51
Feel that this is my destiny	85	94
God wants to test me	87	97
Feel that this is God's punishment	33	37
Praying and religious orders are done	76	84
Still pray after the disease	89	99
Self comfort	77	86

Table 4. Spiritual and religious domain.

Sex	No. of patients	Disturbed sleep		X^2	P-value
		No.	%		
Males	45	35	78	2	>0.05
Females	45	40	89		
Material status					
Single	22	19	86		
Married	61	50	82	0.26	>0.05
Divorced	1	1	100		
Widowed	6	5	83		
Duration of dialysis (Y)					
<3	50	45			
3-6	27	18		13093	<0.01
>6	13	12			

Table 5. Sleep disturbances according to sex, marital status and duration of dialysis.

Sex	No. of patients	Support (Yes)		X^2	P-value
		No.	%		
Males	45	20	44	13.83	<0.01
Females	45	37	82		
Material status					
Single	22	16	73		
Married	61	35	57	1.89	>0.05
Divorced	1	1	100		
Widowed	6	4	67		

Table 6. Family financial support according to sex and marital status.

A belief that death was the solution was mostly noticed in the age group 50-59 years, illiterates, females, and in those who were dialyzed for 1-2 years (28%).

DISCUSSION

Chronic dialysis imposes a considerable burden on patients and families.[5] In the current study, it was found that 83% of the sample was able to walk, but only a few (19%) walked to their work place. Half of the patients walked for enjoyment; this is similar to a Spanish quality of life study reported in 1993 which reported that the life activities affected most severely are work, pastimes, sleep, and rest.[6]

Two thirds of the sample noted loss of energy and fatigue; this agrees with a Pittsburgh study which found that 87% of the studied patients had fatigue that

could be attributed to inadequate dialysis, anemia or both.[7] Most of our patients complained of pain in the lower extremities associated with poor sleep. A Canadian study concluded that dialysis patients with restless leg syndrome were twice as likely to have significant insomnia as patients without restless leg syndrome.[8]

Two thirds of the patients were not able to work. This agrees with an annual data report which found that even among younger patients, only 37% were able to work, and patients with more education were more likely to report being able to work full time.[9]

About two thirds of the patients were anxious, and 60% were restless. This agrees with the Pittsburgh study which revealed that 32% of the patients were worried, 26% felt sad, 26% felt nervous, and 26% noted irritability.[7] According to the depressive scale, feeling sad was noticed in three quarters of the patients. Similar findings were reported in a US study where an overall 45% of the patients scored positive on the depression screening measure.[3]

The study revealed that there were very good relations between most of the patients and their parents, and to a lesser extent with sisters and brothers. Three quarters of the patients enjoyed friendships, but in spite of this, 60% had poor relations with friends. This might be attributed to many reasons as the study showed that more than forty percent felt inferior to others, and a quarter were afraid to socialize with others. Participation in social activities was seen more in males than females. This was also reported in a Greek study.[4]

The marital relationship was good in two thirds of the sample and acceptable for one third of the patients. The Greek study reported that marital adjustment of the spouse was influenced particularly by the duration of the illness, social provisions, and financial state of the family.[4] Sexual relationship was reported as good in 19%, acceptable in 19%, and bad in 62% of the patients. Disturbances in sexual function are a common feature of chronic renal failure. Over 50 percent of uremic men complain of symptoms that include erectile dysfunction, decreased libido, and marked declines in the frequency of intercourse. These problems may improve but rarely normalize with the institution of maintenance dialysis. Disturbances in menstruation and fertility are commonly encountered in women with chronic renal failure, usually leading to amenorrhea by the time the patient reaches end stage renal disease.[10]

About three quarters of the sample were eating with the family; the other quarter preferred to eat alone. This might be due to food restriction. The fact that some of the patients were carriers of hepatitis B and C virus might cause them to eat alone. Food restriction was reported by more than sixty percent of the patients; the important nutrients to be controlled were protein, sodium, potassium, phosphorus, fluid and fat.[12]

In the present study, outside financial support was found to be essential in two thirds of the patients; less than one third were embarrassed by that support. The highest family financial support was seen in the youngest age group. The reason for this is that this group either had a history of renal impairment since childhood and they were never employed or they quit their job because of dialysis. Females were more in need of the support than males; this is because three quarters of the females were housewives with no income. This is in accordance with the Biris study in Greece which reported that most patients quit jobs and that the vast majority depended on state run pension plans.[4]

In the current study, females agreed with the suggestion that death is the solution more than males; this is because of the feeling of females that they are neglected by their families. In addition, women may be suffering more than men because they usually have a higher morbidity. This is in agreement with a study in the UK,[11] which reported that although women live longer than men, they have a higher morbidity, not only from pregnancy, but also from chronic disability and mental illness. Patients who had undergone dialysis for five years or more were the least likely to agree with the suggestion that death is the solution. It is possible that spiritual and religious beliefs increased as the duration of dialysis increased.

CONCLUSION

Patients on hemodialysis have an altered quality of life that is related in part to their disease (chronicity,

disability and complications) and in part to the constraints resulting from the necessity for chronic hemodialysis.

We believe that these patients should receive special health and social care through qualified physical, psychological and social rehabilitation centers in order to assist them to live as normally as possible.

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Original Article موضوع أصيل

GENOTYPING OF TOXOPLASMA GONDII STRAINS IN PREGNANT WOMEN WITH TOXOPLASMOSIS IN GEZIRA STATE, CENTRAL SUDAN

التنميط الجيني لطفيلي المقوسة الغوندية لدى الحوامل المصابات بداء المقوسات بولاية الجزيرة ـ وسط السودان

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ABSTRACT

Objective: *To perform genotyping of Toxoplasma gondii among pregnant women with toxoplasmosis in Central Sudan.*

Methods: *The study group was represented by 94 pregnant women who had abortion between the second and fourth months of gestation, whereas the control group consisted of 94 full term normally delivered women. The study was conducted at Wad Medani Teaching hospital, Gezira State, Central Sudan during the period from March 2002 to May 2004.*

Results: *PCR test on aborted and placental tissues revealed positivity rates of 19.1% and 22.3%, in study and control groups respectively, with no significant difference between them (P=0.55). This compared to a seroprevalence rate of 35.1% and 39.4% in study and control groups respectively. Genotyping from clinical samples using PCR/RFLP revealed Toxoplasma gondii type II in 89% and 95% of the study and control groups, respectively, whereas, 11% and 5% were infected with type III.*

Conclusion: *The most prevalent strain of T. gondii among the pregnant women was Type II followed by type III, but type I was completely absent.*

ملخص البحث

هدف الدراسة: القيام بالتنميط الجيني للمقوسة الغوندية لدى سيدات حوامل مصابات بداء المقوسات.

المواد والطرق: أجريت الدراسة في مشفى واد ميداني الجامعي بمحافظة الجزيرة في وسط السودان خلال الفترة بين آذار 2002 وأيار 2004. تألفت مجموعة الدراسة (الحالات) من 94 سيدة حامل تعرضن لإسقاط بين الشهر الثاني والرابع من الحمل، أما مجموعة الشاهد فقد شملت 94 سيدة أنجبن بتمام الحمل.

النتائج: أظهر اختبار PCR لكل من النسيج الاسقاطي والمشيمة إيجابية بنسبة 19.1% ضمن حالات الدراسة مقارنة بـ22.3% في حالات الشاهد، ولم يظهر الاختبار الإحصائي فرقاً ذو دلالة إحصائية بينهما (P = 0.55). هذا وقد كان معدل الانتشار المصلي للإصابة 35.1% للحالات و39.4% للشواهد. أظهر التنميط الجيني للعينات السريرية باستخدام طريقة PCR/RFLP وجود النمط II للمقوسة الغوندية لدى 89% من الحالات و95% من الشواهد، بينما ظهر النمط III للمقوسة الغوندية لدى 11% من الحالات و5% من الشواهد.

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الخلاصة: النمط II للمقوسة الغوندية هو النمط الأكثر شيوعاً بين السيدات الحوامل يليه النمط III للمقوسة الغوندية، بينما لم يلاحظ النمط I أبداً.

INTRODUCTION

Toxoplasmosis is a worldwide zoonotic disease caused by *Toxoplasma gondii* parasite. Pregnant women infected with *T. gondii* can transmit the infection to their fetuses either transplacentally or during vaginal delivery.[1] Women infected at the end of pregnancy may remain seronegative at delivery.[2]

The manifestations of the disease in the fetus may vary from inapparent to fatal, depending on its age at the time of primary infection, the virulence of the strain of *T. gondii*, and the immune status of the host.[3,4,5]

Although they are genetically very similar, *T. gondii* strains comprise three distinct clonal lineages which predominate worldwide, namely types I, II and III.[6,7] Regardless of the genetic background, strains of type I are identified to be highly virulent in mice, while types II and III are non virulent.[6,8]

Isolation processes of parasites are known to be difficult in their application, and they take a long time. Nested PCR analysis at the SAG2 polymorphic locus, followed by restriction fragment length polymorphism (RFLP) is considered valuable for *T. gondii* genotyping in clinical specimens.[9]

The aim of this study is to characterize the *T. gondii* strains associated with pregnant women with toxoplasmosis in the Gezira State, Central Sudan.

METHODS

The sample collection was carried out during the period from March to July 2002 in the Obstetric and Gynecology Teaching Hospital, Gezira State, Central Sudan. This hospital has a huge encatchment area, being the biggest referral hospital in the State.

The cases were 94 pregnant women who presented to the hospital with abortion. The controls were 94 women gave birth to living, full term, healthy babies. All women were between 15-40 years, non diabetic, and non hypertensive. The entire study population was clinically evaluated by an obstetrician using pre-designed forms for the history and general condition.

Aborted tissue specimens were collected and immediately preserved in 70% ethanol for molecular studies. Placental tissue (the part just attached to the umbilical cord) was collected from controls and preserved in the same way.

DNA was extracted from aborted and placental tissues using Puregene DNA purification kits (Gentra system Minneapolis, Minnesota USA) in accordance with the manufacturer's instructions.

The tests were performed at the Molecular Biology Laboratory at the King Saud University, Riyadh, KSA. Results were analyzed using the chi-squire test.

Polymerase Chain Reaction

PCR analysis as described by Burg et al., (1989)[10] was carried out for amplification of the 35 fold repetitive *T. gondii* B1 gene using PCR mixture consisting of, 5 µl of 10x PCR buffer containing (100 mM Tris HCl, 15 mM $MgCl^2$, 500mM KCl), 200 µM dNTPS mix, 20 pmols of each primer, 2U of Taq DNA polymerase, (Roche Diagnostics-Germany), and 100 ng of genomic DNA, in a total reaction volume of 50 µl. The primers used were B1F1 (5′GGAACTGCATCCGTTCATGAG3′). B1R1 (5′TCTTTAAAGCGTTCGTGGTC3′) (TIB-MOLBIOL-Berlin). The primers correspond to the *T. gondii* B1gene nucleotides 694-714 and 887-868, respectively. In order to avoid possible contamination, negative controls (no DNA, and samples negative by both ELISA IgG, and IgM) and positive controls from different strains of *T. gondii* were used. The efficiency of the amplification was tested by, electrophoresis in 2% agarose gel (Roche Diagnostics-Germany)

Nested PCR

One µ l of the 1:10 diluted PCR products of the first amplification were used as template for the second round. The primers were replaced with the internal set B1F2 (5′TGCATAGGTTGCAGTCACTG3′) B1R2

(5′GGCGACCAATCTGCGAATACACC3′) (TIB-MOLBIOL-Berlin, Germany); they correspond to the *T. gondii* B1gene nucleotides 757-776 and 853-831, respectively. The DNA products were amplified using the same PCR conditions, except for the annealing temperature which was 59°C for 2 min. Both control positive and control negative were used. PCR products were analyzed using 2% agarose gel electrophoresis and visualized under UV light.

Amplification of SAG2 locus

Samples confirmed positive by Nested PCR amplification of *T. gondii* B1 gene were analyzed using a nested PCR that separately amplifies the 5′ and 3′ ends of *T. gondii* SAG2 locus. The PCR reaction mixture consisted of 5 µ l of 10x PCR buffer (100 mM Tris HCl, 15 mM MgCl, 500 mM KCl), 1 mM MgCl, 200 µm dNTPS mix, 20 Pmol of each primer, 2U of Taq DNA polymerase enzyme and 150 ng of genomic DNA in a total reaction volume of 50µl. The 5′ end of the SAG2 locus was amplified with primers SAG2 F4 (5′GCTACCTCGAACAGGAACAC3′). SAG2R4 (5′GCATCAACAGTCTTCGTTGC3′) (TIB-MOLBIOL-Berlin-Germany) at an annealing temperature of 61.5C°.

A second amplification was performed using 1 µl of the 1:10 diluted PCR products from the first amplification reaction as template for the second round, with similar PCR reaction mixture and conditions except for the primers, which were replaced by the internal set of primers, SAG2F (5′GAAATGTTTCAGGTTGCTGC3′) SAG2R2 (5′GCAAGAGCGAACTTGAACAC3′), (TIB-MOLBIOL-Berlin-Germany). Amplification of the 3′end was performed with primers SAG2 F3 (5′TCTGTTCTCCGAAGTGACTCC3′). SAG2R3 (5′TCAAAGCGTGCATTA TCGC3′), (TIB-MOLBIOL-Berlin-Germany) at an annealing temperature of 60°C.For the second amplification, 1 µl of the 1:10 diluted PCR products were used as template for the second amplification reaction, with internal primers SAG2F2 (5′ATTCTCATGCCTCCGCTTC3′). SAG2R (5′AACGTTTCACGAAGGCACAC3′). Similar PCR reaction mixture and conditions of the first amplification were used in the second round and 2% agarose gel was used to analyze the amplified PCR products.

Purification of the amplified products

The amplified products were purified from primers, nucleotides, polymerases, and salts using, QlAquick PCR purification kit (QIAGEN Inc. Avenue Stanford, Valencia, CA, USA).

Genotype analysis

Genotype analysis was performed using PCR-RFLP (Restriction Fragment length Polymorphism). The 5′ end was digested using Sau3AI endonuclease enzyme (Sigma-Aldrish, Inc. Saint Louis USA), whereas the 3′ end of the SAG2 locus was digested using HhaI endonuclease enzyme. The products were analyzed using 2% agarose gel and visualized under UV light. Control positive samples from *T. gondii* strains RH (type I), LEG 96-1(type II) and, LEG-NJA (type III) were used as standard for determination of *T. gondii* genotypes. All the *T. gondii* strain types were a generous gift from Professor M.L. Darde of France.

RESULTS

The mean ages in the study and control groups were, 29.1±6 and 27.2±5.5 years, respectively. Polymerase Chain Reaction (PCR) Test Application of PCR test in the study group revealed positivity percentage of 19.1 (18 out of 94), while 21 out of 94 (22.3%) women were positive in the control group.

No significant difference was found between the two groups, (X^2 = 0.36, *P* value = 0.55) (Table 1). PCR assay based on amplification of *T. gondii* B1 gene is shown in Figure 1. The results showed that samples 1,2,4,11 were positive by PCR and samples. 3,5,6,7,8,9,10 were negative.

Groups	No	PCR test				Positivity rate
		Positive		Negative		
		No	%	No	%	
Study group	94	18	46.2	76	51	19.1
Control group	94	21	53.8	73	49	22.3

Table 1. PCR test in study and control groups.

Genotyping

Characterization of *T .gondii* genotypes by the Polymerase Chain Reaction/ Restriction Fragment Length Polymorphism (PCR/RFLP) technique was performed to detect the strain types in each sample.

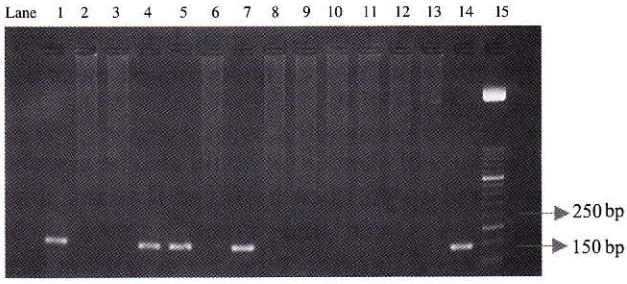

Figure 1. Amplification of T. gondii B1 gene
Lane 1: control positive. Lane 2: control negative.
Lane 3: control negative. Lane 4,5,7,14 :samples 1,2,4,11, respectively. Lane 6,8,9,10,11,12,13: samples 3,5,6,7,8,9,10 respectively. Lane 15: 50- bp DNA marker.

First amplification of the 5′ end of SAG2 locus is shown in Figure 2. Second amplification of the 5′ end of SAG2 locus (Nested PCR) obtained 241 bp fragments as shown in Figure 3.

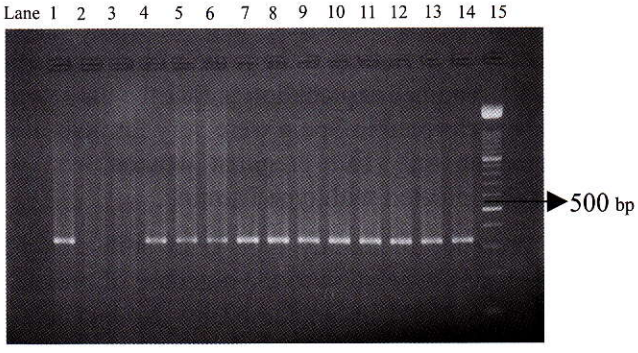

Figure 2. First amplification of the 5′ end of SAG2 locus.
Lane 1: positive control
Lane 2: negative control. Lane 3: negative control.
Lane 4-14: some positive samples.
Lane 15: 100- bp DNA marker.

Restriction Digestion

Two of the total 18 samples positive by PCR in the study group were characterized as type III (11.11%), compared to (4.76%) in the control group (one out of 21). All the rest of the PCR positive samples in both study and control groups were characterized as type II strains (88.89%) and (95.24%), respectively.

Restriction digestion of the 5′ end amplified products using Sau3AI is illustrated in Figure 4. According to the pattern obtained by the digestion of the reference strains (type, I, II, and III) only one sample was digested and characterized as Type III (Lane 11). Other samples were undigested, accordingly they may be of either type I or II.

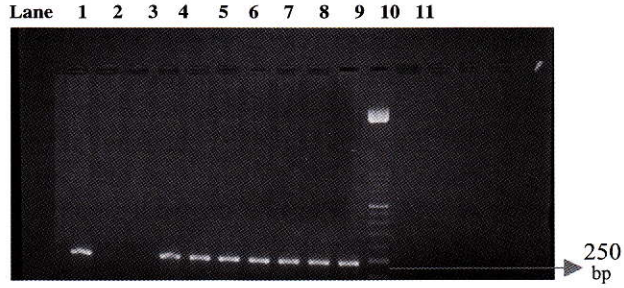

Figure 3. Second amplification of the 5′ end of SAG2 locus.
Lane 1: positive control. Lane 2: negative control.
Lane 3: negative control. Lane 4-10: some positive samples.
Lane 11: 50- bp DNA marker.

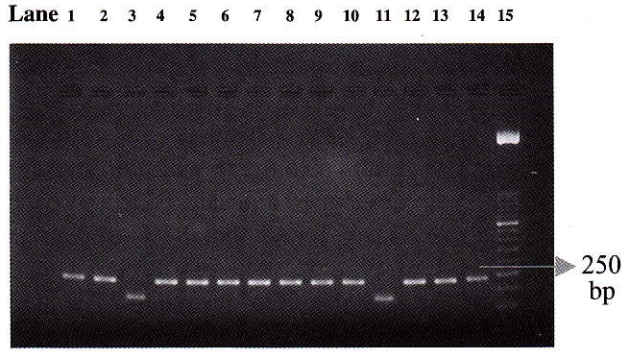

Figure 4 Sau3AI Restriction digestion of the 5′ end amplification products
Lane 1: Type 1 strain. Lane 2: Type II strain.
Lane 3: Type III strain.
Lanes 4-10, 12, 13, 14: strains from clinical samples
Of non type III strains. Lane 11: sample of
Type III> Lane 15: 50-bp DNA marker.

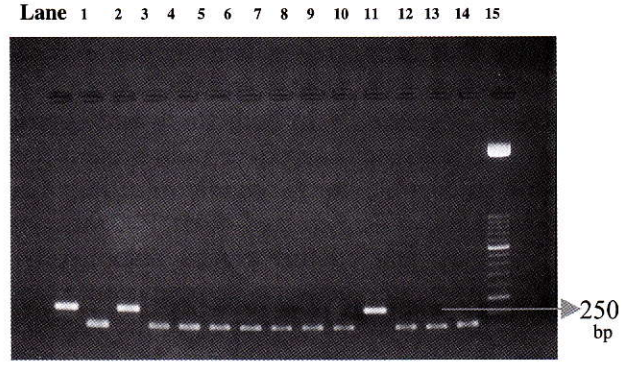

Figure 5. HhaI Restriction digestion of the 3′ end amplification products.
Lane 1: type I strain. Lane 2: Type II strain.
Lane 3: Type III strain.
Lanes 4-10, 12,13,14: strains from clinical samples of type II strain.
Lane 11: sample of type III strain. Lane 15: 50- bp DNA marker

The amplified products of the 3′ end of SAG2 locus were digested using HhaI restriction enzyme as shown in figure 5. All the samples were digested except one in lane 11. The digested samples obtained pattern resembling control type II pattern, so they were characterized as type II. The non digested sample in lane 11 was characterized as type III because it was digested by the Sau3AI Restriction digestion enzyme as mentioned before.

DISCUSSION

The most prevalent strain of *T. gondii* in both study and control groups, was type II. This finding is similar to that of Ajzenberg *et al.*,[11] who studied 86 *T. gondii* isolates collected from patients with congenital toxoplasmosis for the detection of the influence of *T. gondii* genotypes on the severity of human toxoplasmosis. The results also agree with the findings of Howe *et al.*[9] who developed a nested PCR approach at the SAG2 locus. They found that 81% of human samples belonged to type II, whereas type III was found in 9% of the samples. The presence of a high percentage of the avirulent type II strains in our subjects, may partially explain the fact that all of the *T. gondii* infected women in our control group delivered normal healthy babies, as type II and III strains were reported to be avirulent in mice.[12,13] On the other hand, the most virulent *T. gondii* strain in mice was found to be of type I. It causes severe illness in the fetus or newborn.[7,14]

In a previous study in Sudan, personal and social data revealed that eating raw viscera of herbivorous animals and sheep liver were associated with a high prevalence of *T. gondii.*[15] In both study and control groups, women who ate sheep liver were around four times more susceptible to *T. gondii* infection than those who did not (OR 3.87 and 4.41; P=0.002 and P=0.001 in study and control groups respectively.) The strong association between seroprevalence and eating sheep liver could be attributed to the fact that eating sheep the later is very popular in Sudan, which is a heavy consumer of sheep meat. The subjects probably acquired the infection from sheep, a frequent host for *T. gondii.*[16]

In many studies, the association between acute *T. gondii* infection and raw or undercooked meat was a consistent finding.[17,18.19]

The ingestion of sheep liver could also be associated with the increased prevalence of type II strains among our subjects. Owen and Trees,[20] found a high prevalence of *T. gondii* type II among domestic animals, especially sheep, in ten farms in north Wales and northwest England. In all abortion samples, the detected T. gondii strains were of type II. In this study, there could be an epidemiological link between *T. gondii* infection in some food animals and the prevalence of *T. gondii* type II strains. Howe and Sibley[7] found that type I was associated with human congenital toxoplasmosis. Another study performed in Spain reported a high prevalence of non type II strains in congenital toxoplasmosis cases.[21] The discrepancy could be attributed to the epidemiological difference between different countries, and it could also be explained by a variation in the route of transmission of *T. gondii*. Another explanation is that the data used in the study performed in Spain were very limited. It was conducted on only five pregnant women who were found to be infected with type I strain.

The presence of mainly type II in both study and control groups in relation to the outcome of pregnancy in this study could be explained by the fact that the level of parasitemia and the susceptibility of the hosts to *T. gondii* infection could be different, as the outcome of *T. gondii* infection with type II strains depends on the dose of infection and the susceptibility of the infected host.[21]

CONCLUSION

The most prevalent strain of *T. gondii* among pregnant women in Gezira was type II followed by type III, with a complete absence of type I.

Acknowledgement

We are greatly indebted to Dr. Mai Hamad Eljasir for financial and laboratory support.

Our sincerest gratitude goes to Professor Marie Laurie Darde of France for her directions and positive controls concerning and supporting the materials related to genotyping.

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Original Article موضوع أصيل

MODIFIED SURGICAL TREATMENT OF ATROPHIC RHINITIS

العلاج الجراحي المعدل في حالات التهاب الأنف الضموري

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ABSTRACT

Objectives: *The aim of the study was to evaluate the role of alternate periods of surgical closure of the nostrils in treating patients with atrophic rhinitis.*

Methods: *A descriptive study was conducted involving 11 patients clinically diagnosed as atrophic rhinitis who underwent surgical closure of the nostrils alternately. These patients were treated in the Department of ENT, Al-Jamhori Teaching Hospital, Mosul, Iraq during the period from April 1990 to December 2004. The parameters analyzed included age, sex, clinical presentation and residence. Moreover, evaluation of the result of alternative periodic surgical closure of the nostrils was evaluated.*

Results: *The study was conducted on 11 patients with atrophic rhinitis (10 females and 1 male). The average age was 16.2 years with a range of 13-20 years. The peak age incidence was in the 18th year of life. The most frequent clinical presentation was nasal obstruction in spite of wide nasal cavities. There was improvement of symptoms with regeneration of the nasal mucosa in 10(90.9%) patients.*

Conclusion: *All of the patients accepted this operation as the other nostril was left open to allow for a relatively functional nasal airway. The results of this series suggest that this technique is useful in the treatment of atrophic rhinitis.*

ملخص البحث

هدف الدراسة: تهدف هذه الدراسة إلى تقييم دور عملية الإغلاق الجراحي المتناوب لمنخري الأنف في علاج التهاب الأنف الضموري.

طرق الدراسة: أجريت هذه الدراسة الوصفية على 11 مريضاً تم تشخيصهم سريرياً كحالات التهاب الأنف الضموري وخضعوا إلى عملية إغلاق جراحي متناوب لمنخري الأنف. تمت هذه الدراسة في شعبة الأذن والأنف والحنجرة/مشفى الجمهوري التعليمي، الموصل/العراق في الفترة من نيسان/أبريل 1990 إلى ديسمبر/كانون أول 2004. تشمل البيانات التي حللت في الدراسة كل من العمر، الجنس، الأعراض السريرية والإقامة. تم تقييم دور عملية الإغلاق الجراحي المتناوب لمنخري الأنف في علاج هذا المرض.

النّتائج: أجريت الدراسة على 11 مريضاً شخّصوا سريرياً بوجود التهاب أنف ضموري، منهم 10 إناث وذكر واحد. وكان متوسط العمر بمعدل 16.2 سنةً بمجال تراوح بين 13–20 سنة. تشير النتائج إلى أن ذروة الإصابة بالتهاب الأنف الضموري كانت في السنة الثامنة عشرة من العمر. فضلا عن أن انسداد منخري الأنف رغم توسع مجرى الأنف كان من أكثر المظاهر السريرية شيوعاً. هذا من ناحية ومن ناحية أخرى وجد بأن 90.9% من المرضى استجابوا لهذه العملية من حيث تراجع الأعراض وترمم المخاطية الأنفية.

الخلاصة: لقد لاقت هذه العملية قبولاً لدى المرضى حيث أن المنخر الآخر قد ترك مفتوحاً للحفاظ على فعالية وظيفية مقبولة. إن النتائج السابقة تقترح اعتماد هذه التقنية كعلاج في حالات التهاب الأنف الضموري.

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INTRODUCTION

Atrophic rhinitis is a chronic nasal disease characterized by mucosal atrophy, resorption of the underlying bone, the formation of thick crusts, and a distinctive fetid odor.[1] Atrophic rhinitis was first described in 1876 by Bernhard Fraenkel as a triad of fetor, crusting, and atrophy of nasal structures.[2]

Most authors classify atrophic rhinitis into two categories: primary and secondary. The primary form is of spontaneous onset, slowly progressive, and occurs in a previously healthy nose.[1] The etiology of primary atrophic rhinitis is still unknown, but some bacteria such as *Klebsiella ozaenae*, *Proteus*, *Escherichia coli*, and *Bacillus pertussis* have been isolated from the nasal secretions of patients as causative organisms.[3] Secondary atrophic rhinitis results from chronic sinusitis, trauma, sinonasal surgery, granulomatous disease, radiation exposure, and/or intranasal cocaine use.

Treatment of this disease is conservative initially. Surgery is indicated if medical treatment fails.[4] The surgical procedures fall into three general categories, denervating operations, volume reduction operations, and nasal closure operations. Nasal closure operations were introduced by Young who proposed that functionally closing the nostrils would prevent the drying effects of environmental air, and thus reduce the crusting and allow the underlying mucosa to heal.[2]

Our study was designed to evaluate the role of a modified Young operation employing alternate surgical closure of the nostrils, each side for one year, in treating patients with atrophic rhinitis.

METHODS

Patients. This study presents a descriptive analysis of 11 patients who were clinically diagnosed with atrophic rhinitis, confirmed by histopathology. The patients underwent alternate surgical closure of the nostrils, each side for one year. All patients were proved to have primary atrophic rhinitis, *i.e.* there were neither predisposing factors for their disease nor any previous surgery.

These procedures were performed in the Department of ENT at Al-Jamhori Teaching Hospital Mosul, Iraq during the period from April 1990 to December 2004.

Atrophic rhinitis was suspected clinically because of nasal obstruction, crusting, epistaxis, anosmia, and/or headache. A strong permeating odor was present in most of the cases. The clinical diagnosis of atrophic rhinitis was confirmed by histopathological examination which showed squamous metaplasia of the nasal mucosa, atrophy of mucous glands, and scarce or absent cilia with endarteritis obliterans.

Methods. The patients included in the study underwent alternate surgical closure of the nostrils. The indication for surgery was intractable atrophic rhinitis not responding to medical treatment. The surgical closure of the nostrils was performed under general anesthesia. One nostril was closed for one year followed the next year by closure of the other side with opening the closed side at the same operation. The procedure began with the injection of normal saline injection at the mucocutaneous junction of the vestibule followed by circumferential incision and raising of mucous and skin flap. The mucous flaps were sutured with interrupted 3-4 stitches of 3/0 catgut. Meanwhile, the skin flaps were further sutured with interrupted 6-7 stitches 3/0 silk for complete closure. Histopathological examination was conducted on the nasal mucosa of the opened side to confirm progress of the mucosa to normal.

Statistical analysis. Statistical analysis was performed using the chi square (χ^2) test.

RESULTS

The mean age of the patients was 16.2 years with a range of 13-20 years. The peak age incidence was in the 17-18th year of life (Figure 1). The study included ten female patients (90.9%) and one male patient (9.1%) with a ratio of 10:1 (Figure 2).

It was found that nine patients (81.8%) were from urban areas and two (18.2%) were from rural areas (Figure 3). This difference was statistically significant (χ^2=5.89, P<0.05).

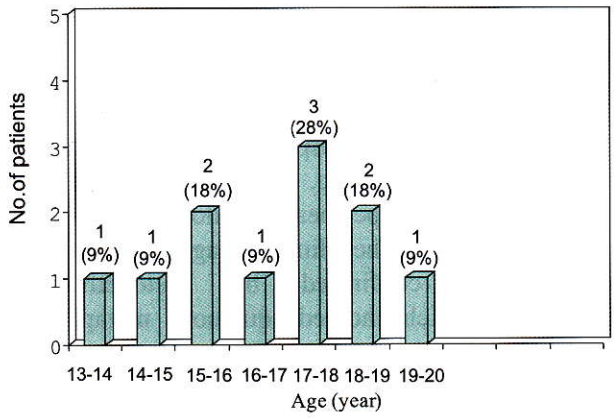

Figure 1. Age distribution of the patients among the sample of study.

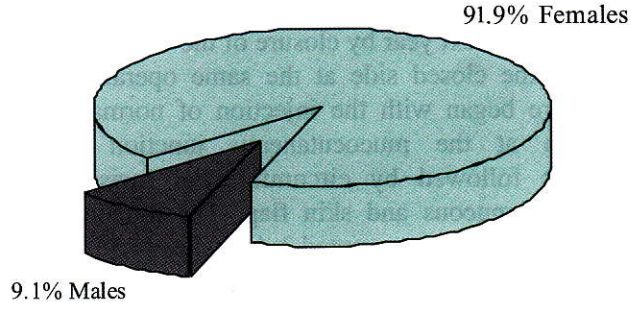

Figure 2. Sex distribution in percentage.

Table 1 shows the clinical findings of the patients included in the study. The main presenting symptoms of the patients were nasal obstruction, anosmia, ozena, headache and epistaxis, whereas wide nasal cavities and nasal crusting were the main frequent signs.

I. Symptoms (n = 11)	Number	%
Nasal obstruction	11	100%
Anosmia	9	81.8%
Fetid odor (ozena)	8	72.7%
Headache	7	63.6%
Epistaxis	6	54.5%
II. Signs	Number	%
Wide nasal cavities	11	100%
Crusting	10	90.9%

Table 1: The clinical presentation of the patient.

The follow up of these patients after performing the surgical closure of the nostrils revealed that in ten patients (90.9%) there was improvement of symptoms with regeneration of the nasal mucosa whereas one patient (9.1%) did not respond to nasal closure and had recurrence of symptoms. This difference was statistically significant (χ^2=9.44, P<0.01). Moreover, all patients were pleased with this operation as the other side had been left open to allow for a functional nasal airway. Three patients (27.3%) required another operation for reopening of the closed nostril because of excessive postoperative fibrosis. The procedure involved stenting with an endotracheal tube for more than three weeks.

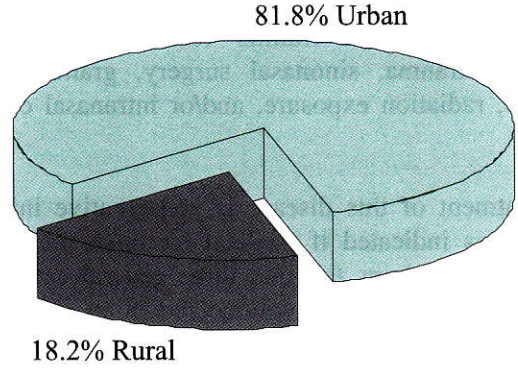

Figure 3. Residence.

DISCUSSION

The average age of our patients was 16.2 years with a female:male ratio of 10:1. It was found that nine (81.8%) of patients were living in urban areas and two (18.2%) were from rural areas. Bunnag[5] conducted a study of 46 patients with primary atrophic rhinitis in Thailand and found the female to male ratio was 5.6 to 1. He believed that the significance of environmental factors was supported by the finding that 43.5% of his patients were industrial workers, but a hereditary factor has not been ruled out. Moreover, another study reported that in 14 patients with primary atrophic rhinitis, there were six males and eight females. Their mean age was 30 years and all of them belonged to poor socioeconomic groups.[6]

The main presenting symptoms of our patients were nasal obstruction, anosmia, ozena, headache and epistaxis, whereas wide nasal cavities and nasal crusting were the main signs. Similarly, another study reported that halitosis, headache, nasal stuffiness, anosmia, and occasional epistaxis on removal of hard nasal crusts were the frequently encountered symptoms.[6]

It can be concluded that atrophic rhinitis affects both sides of the nose, occurs after puberty, and is commoner in women. Because of this, an endocrine imbalance has been suggested as a cause while others believe it to have autoimmune basis possibly initiated by a virus or due to iron or vitamin deficiency.[7]

Review of the histories revealed that all of our patients were cases of primary atrophic rhinitis. These patients did not respond to medical treatment so they underwent alternate surgical closure of the nostrils each side for one year. Singh[8], Gray,[9] and Cowan[2] have reported that primary atrophic rhinitis is rare in the US and Western Europe. Most cases are reported in China, Egypt, and India. Yanagisawa of England[1] and Wang of China[10] reported that secondary atrophic rhinitis accounts for most cases encountered today. They suggest that excessive turbinate surgery has been both implicated and acquitted in the literature as an etiology for secondary atrophic rhinitis.

Medical management of atrophic rhinitis by continuous nasal hygiene usually suffices for most patients. Standard hygiene therapy entails frequent nasal douching with a solution containing sodium chloride and sodium bicarbonate followed by 25% glucose in glycerin drops. Surgery is indicated if the medical treatment fails.[1,4,7] The aim of surgery is either to narrow the nasal cavity or in special cases to close the nostril.[4] Numerous surgical procedures have been described to reduce the caliber of the airway by submucosal insertion of grafts or injection of Teflon paste to form adhesions between the nasal septum and the unfractured lateral nasal wall. A variety of other treatments, including oral potassium iodide, injection of placental extracts, and cervical sympathectomy are of doubtful benefit. Moistening of the nasal mucosa has been attempted by diverting Stensen's duct into the antrum. None of these techniques have had long term success. The only operation which seems to be of any real benefit is that in which small skin flaps raised from the vestibule are used to seal it completely for periods of up to one year.[7,9] Similarly, Cowan and Ryan[2] reported that the closure of nostrils can be staged several months apart to allow for a functional nasal airway. Sinha, Sardana and Rjvanshi[11] found that bilateral nasal closure was not tolerated by some patients so they recommended partial nasal closure leaving a 3 mm hole. They reported that this procedure was well tolerated. Han-Sen[12] found that complete cure of the disease was achieved with combined treatment with vitamin A and streptomycin.

Histopathological study of the nasal mucosa in our patients was conducted before surgery to confirm the diagnosis, and after surgery to show the evolution of the disease process. Most authors agree that there are patches of metaplasia from columnar ciliate to sqamous epithelium; there is a decrease in the number and size of compound alveolar glandsand that there are dilated capillaries. The mucociliary function has been proven to be impaired in accordance with the loss of cilia.[5,7,13] Another study[6] reported that epithelial dysplasia and *in situ* malignant transformation were noted in one patient among 14 cases of primary atrophic rhinitis. As metaplasia is a known predisposing factor for malignancy, the author strongly believes, that the association of atrophic rhinitis and pre-cancerous lesions appear to be more than coincidental and deserve further studies.

CONCLUSION

All the patients accepted this operation as the other side of the nose had been left opened to allow for a relative functional nasal airway. Given the good results in ten patients, we strongly recommend this operation in treating atrophic rhinitis.

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Original Article موضوع أصيل

THE LONG TERM IMPACT OF THYROIDECTOMY IN LARYNGEAL CANCER SURGERY

التأثيرات البعيدة لاستئصال الغدة الدرقية خلال جراحة سرطان الحنجرة

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ABSTRACT

Introduction: *Direct extension into the thyroid gland may occur in carcinomas of the larynx, trachea, esophagus and pharynx. The standard surgical treatment of these tumors usually includes partial or total thyroidectomy. The objective of our research work is to study excised thyroid lobes, trying to explain its possible effect on the tumor prognosis and subsequent late complications.*

Materials & Methods: *Retrospective study performed using a twenty serially sectioned whole organ laryngectomy with thyroidectomy specimens. The specimens were thoroughly sectioned at different levels with particular attention to the thyroid lobes. The results were compared with the preoperative clinical data and the late postoperative complications.*

Results: *Clinical tumor staging records were of advanced type. Two of the excised thyroid lobes demonstrated an invasion with sequamus cell carcinomas. In most instances the subglottic space and the laryngeal skeleton were involved by tumor cells. Seven patients developed stoma recurrence and three had recurrent pharyngeo-cutaneous fistula.*

Conclusion: *Thyroidectomy is not a routine part of total laryngectomy and had questionable efficacy to the late patients' outcome and tumor recurrence. Metastasis to the Subglottic site accused as a poor prognostic sign of laryngeal carcinoma.*

ملخص البحث

تمهيد: قد يحدث امتداد مباشر للورم إلى الغدة الدرقية في حالات سرطانات الحنجرة، الرغامى، المري والبلعوم. تتضمن المعالجة الجراحية القياسية لهذه الأورام إجراء استئصال جزئي أو كلي للغدة الدرقية. يهدف هذا البحث إلى دراسة الفصوص الدرقية المستأصلة خلال جراحة استئصال الحنجرة لمحاولة تفسير التأثيرات المحتملة لهذا الاستئصال على إنذار الورم واختلاطاته الآجلة.

المواد والطرق المستخدمة: أجريت دراسة مستقبلية شملت 20 عينة من العينات المستأصلة خلال جراحة سرطان الحنجرة ومن ضمنها الفصوص الدرقية. تم إجراء مقاطع بمستويات مختلفة مع تركيز خاص على الفصوص الدرقية، تمت مقارنة النتائج مع المعطيات السريرية قبل الجراحة والاختلاطات الآجلة بعد الجراحة.

النتائج: أظهر تحديد المرحلة السريرية للحالات المدروسة أوراماً ذات مراحل متقدمة. أظهر اثنان من الفصوص الدرقية المستأصلة اجتياحاً بسرطانة شائكة الخلايا، كما لوحظ اجتياح للفراغ تحت المزمار والهيكل الحنجري بالخلايا الورمية في معظم الحالات، من جهة أخرى فقد تطور لدى 7 مرضى نكس هامشي Stoma recurrence ، كما عانى 3 مرضى من نواسير رغامية جلدية ناكسة.

الخلاصة: لا يمثل استئصال الغدة الدرقية إجراءً روتينياً خلال عملية استئصال الحنجرة الكلي، حيث أن لهذا الإجراء فعالية مشكوك بها على معدل نكس الورم والنتائج الآجلة الملاحظة عند المريض. يمثل وجود انتقالات ورمية للمنطقة تحت المزمار علامة سوء إنذار في سرطانات الحنجرة.

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INTRODUCTION

The incidence of the thyroid gland invasion by laryngeal sequamus cell carcinoma is rare and varies from 6.30% to 20 %.[1]

There was a routine trend towards hemithyroidectomy with advance laryngeal tumor resection, due to occult metastasis. It was reported that about 50% incidence of direct extension to the thyroid gland from the subglottic space tumor. In addition, removal of the thyroid gland will clear the hidden tracheo-esophageal and Para tracheal lymph nodes which is clinically undetectable but histological presents in 50% subglottic carcinomas examined by serial sections. [1,2]

The subglottic cancer spread laterally to cricoids cartilage and distracts the weak interthyro-cricoid membrane with invasion of the prelaryngeal wall and thyroid gland. In addition, there is invasion of the perichondrium and cartilage causing perichondritis and involving thyroid isthmus. Other indirect routes of spread to the thyroid glands are through lymphatic or vascular channels.[1,3,4]

The thyroid gland usually assessed prior to laryngeal cancer surgery. Ultrasonography, fine needle aspiration and cytology and magnetic resonance imaging are used to detect the metastasis lesions.[1]

In This study, we reviewed the pathological staging of the laryngeal surgical specimens. Our objective is to study the excised thyroid lobes, trying to explain its possible effect on the tumor prognosis and the subsequent late complications.

PATIENTS AND METHODS

This is a retrospective study of twenty surgical specimens of total laryngectomy and hemithyroidectomy. They were collected between 1998-2005, from the ENT department of the teaching hospital of Basra.

The preoperative tumor staging was actually accomplished according to the international union against cancer, TNM classification.[6] The clinical staging and the late consequences of surgery are shown in (Table 1) Axial sectioning of the whole surgical specimens and thorough sampling of the excised thyroid lobe were done in the department of pathology of the medical college of Basra. The histology findings included thyroid gland metastasis, the laryngeal skeleton tumor invasion and the subglottic space involvement (Table 2).

The thyroid gland examined preoperatively by Ultrasonography and fine needle aspiration cytology. The surgical decision of resection was largely confirmed by intra-operative palpation of the thyroid lobes.

Case no.	*Clinical stage* (TNM)	Prognosis
1	III	Stoma recurrence
2	III	-
3	IV	Stoma recurrence
4	III	-
5	III	PCF
6	III	-
7	III	Stoma recurrence
8	III	-
9	III	-
10	III	PCF
11	III	-
12	III	-
13	III	Stoma recurrence
14	III	-
15	III	-
16	III	-
17*	III	Stoma recurrence
18	III	PCF
19	III	Stoma recurrence
20	III	Stoma recurrence

Table 1. Preoperative clinical staging and late complications, (-) is uneventful records.PCT, is pharyngeocutaneous fistula

Case No.	*Laryngeal skeleton*		*Thyroid gland*
	Cartilage	*Subglottic space*	
1	+	–	–
2	+	+	–
3	+	+	–
4	+	+	–
5	+	+	–
6	–	+	–
7	–	+	–
8	–	+	–
9	+	+	–
10	–	+	–
11	–	–	–
12	+	+	-
13	+	+	-
14	–	–	-
15	–	+	-
16	–	–	-
17*	+	++	+
18	+	+	-
19	-	-	+
20	+	+	-

Table 2. Histopathological study of laryngeal specimen, (+) is positive record of metastatics and (-) is negative record of lesions.

RESULTS

The patient's preoperative notes showed an advanced tumor in all instances (stage III, IV and transglottic growth). The Thyroid gland clinical data were normal in all cases, except in two patients' records, when there were a multiple small nodules.

There were two positive reports of thyroid gland metastasis. Associated tissue picture showed a malignant cells invasion of the trachea and destruction of the laryngeal cartilaginous barriers. The incidence of thyroid lobe invasion was 10%.

The subglottic area involved in fifteen sections and at different levels. The laryngeal skeleton was frequently invaded and at various locations.

In the late postoperative records, seven cases developed stoma recurrence. This was difficult to treat and most of the patients died within a year, without a clear cause, four recurrent pharyngeocutaneous fistulas were recorded as an early postoperative complication.

DISCUSSION

This is a systemic analysis of twenty serial sections of total laryngectomy specimens. We tried to determine the incidence of the thyroid gland invasion and then to compare that with the clinical data and the late patient's outcome.

The thyroid lobes were examined both clinically and histologically as part of the surgical specimens. The preoperative clinical results and the pathological sections studies were of the same findings.

We recorded that 10% of the thyroid lobes were involved by tumor cells. This is within the average of

the figures reported by authors. Maran recorded a 50% incidence, while Alfio mentioned 6.3-20%, Brennan 8% and Sparano et al gave a 23% figure. [1,2,3,10]

Two positive cases of thyroid gland invasion were reported, as seen in table II. The review of the whole specimen pathology revealed an advanced laryngeal carcinoma and extensive subglottic region extension. Therefore thyroid lobe involvement is a highly suggestive of aggressive tumor picture. This report agreed with results mentioned by Dadas & Bernnan.[10,13]

Although thyroid gland invasion happened in two instances, seven patients developed stoma recurrence and four had recurrent pharyngeo-cutaneos fistulas, this controversy urges the necessity of thyroidectomy in the radical laryngeal cancer surgery. We preferred to be more selective in choosing thyroidectomy as part of laryngectomy. This is including cases with positive clinical thyroid gland findings, advanced and aggressive laryngeal carcinomas and /or severe subglottic extension.

Dads, in his review, concluded that hemithyroidectomy should be performed for all cases of laryngeal malignancies with subglottic extension of more than one centimeter.[13] Other authors agreed that the indications for Total or partial thyroidectomy should be restricted to sequamus cell carcinomas of advanced stages with aggressive behavior and extensive subglottic area involvement.[3] Bernnar added another indication for hemithyroidectomy as involvement of the anterior commissure, and transglottic growth.[10] While Biel recommended hemithyroidectomy for the glottis tumors with more than one centimeter subglottic extension, T4 endo laryngeal tumors with transcartilaginous invasion, and T4 pyriform sinus tumors.[11] Yuan agreed with the restriction of the thyroid excision for sub glottis area involvement by sequamous cell carcinoma.[12]

In fifteen instances, the pathological sections showed metastasis to the subglottic region. Such findings represent an ominous sign for the tumor behavior and prognosis. This could explain the stoma recurrences and PCFs listed in table (I), when there was normal thyroid gland histology. All authors recorded the same possible association with increasing incidence of thyroid gland invasion, stoma recurrence and laryngeal framework extension in all subglottic region malignancy.[5, 6, 7, 8, 9, 10]

In this work, the intra-operative palpation of the thyroid gland was highly adopted to make the decision of epsilateral thyroidectomy. The same method was reported by Dadas and Bernnar.[13, 10]

CONCLUSION

In conclusion, hemithyroidectomy is not a routine choice of total laryngectomy. It has a questionable long term impact on the incidence of tumor recurrence. We should be more selective and to choose the cases of advanced laryngeal cancer with positive clinical thyroid data or extensive subglottic carcinomas. There was strong association between the subglottic site extension and poor prognosis of laryngeal carcinoma.

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Original Article

موضوع أصيل

THE OUTCOME OF SURGICAL DECOMPRESSION FOR CARPAL TUNNEL SYNDROME YIELDS BETTER FUNCTIONAL RESULTS THAN CONSERVATIVE MANAGEMENT AND STEROID INJECTION

أفضلية إزالة الضغط جراحياً في متلازمة النفق الرسغي على التدابير المحافظة وحقن الستيروئيدات

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ABSTRACT

Background: *Surgery for carpal tunnel syndrome is reserved for severe cases or for those having intractable and longstanding symptoms. Non-surgical treatment modalities include hand splinting, ultrasound, oral non-steroidal anti-inflammatory drugs, local steroid injection, and some physiotherapeutic measures. The objective of this study is to evaluate the effectiveness of non-surgical treatment versus standard surgery in improving clinical outcome.*

Patients & methods: *Twenty seven patients with carpal tunnel syndrome were categorized into three groups (12, 9 and 6 patients respectively). Group I received conservative management, and intra-canal injection of Triamicinolone Acetonide was added to group II. Open release of the carpal ligament was kept for patients of Group III. Treatment was given for the recommended period for each modality, and the follow up was for 6 months. Assessment was for the degree of pain relief and improvement in hand grip strength using the ppi scale, and a dynamometer.*

Results: *Except three, all patients were females, and the disease affected the right hand more than the left. After 6 months, results were: In group I 36 % improvement of pain, but with no affect on hand grip strength. In group II, relief of pain reached up to 75% of patients with 12.76% average increase in hand grip strength. In group III surgery gave 82% improvement of pain with 20.5 % average increase in hand grip strength.*

Conclusion: *Open surgical release of the transverse carpal ligament should not be confined to patients with severe symptoms only. Conservative treatment is reserved for patients that either refuse surgery, or are unfit for surgery. Endoscopic release is not recommended for the time being.*

ملخص البحث

هدف الدراسة: تعتبر الجراحة الخط الأخير لعلاج متلازمة النفق الرسغي أو للحالات المتقدمة أو الحالات التي تترافق بأعراض معندة وطويلة الأمد. تتضمن الإجراءات غير الجراحية: جبيرة لليد، العلاج بالأمواج فوق الصوتية، استخدام مضادات الالتهاب غير الستيروئيدية الفموية، الحقن الموضعي للستيروئيدات وبعض الإجراءات العلاجية الفيزيائية. تهدف هذه الدراسة لتقييم فعالية المعالجة المحافظة (غير الجراحية) مقارنة بالجراحة في تحسين النتائج الملاحظة سريرياً.

المواد وطرق الدراسة: تم توزيع 27 مريضاً مصاباً بمتلازمة النفق الرسغي على ثلاث مجموعات: المجموعة الأولى وتضم 12 مريضاً طبقت عليهم المعالجة المحافظة، بينما طبق الحقن لـ Triamicinolone Acetonide ضمن الرسغ على المجموعة الثانية المؤلفة من 9 مرضى، في حين تم إجراء العمل الجراحي لتحرير الرباط الرسغي للمجموعة الثالثة المؤلفة من 6 مرضى. توافقت مدة المعالجة مع بروتوكولات الطرق المستخدمة، تمت متابعة المرضى لمدة ستة أشهر بعد تطبيق التداخلات المختلفة. تضمن التقييم التالي للتدخل: معرفة درجة زوال الألم، تحسن قوة قبضة اليد باستخدام مقياس ppi ومقياس القوة العضلية.

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النتائج: بخلاف 3 مرضى ذكور فإن جميع مرضى الدراسة كانوا إناثاً، كما أن معظم الإصابات سجلت في اليد اليمنى. بعد مرور فترة 6 أشهر للمتابعة أظهرت النتائج: تحسن الألم بنسبة 36% دون تأثير على قوة قبضة اليد في أفراد المجموعة الأولى، وارتفاع نسبة تحسن الألم لـ75% في أفراد المجموعة الثانية مع زيادة في قوة قبضة اليد بمتوسط 12.67%. أما أفراد المجموعة الثالثة فقد لوحظ تحسن في الألم بنسبة 82% وزيادة بقوة قبضة اليد بمتوسط 20.5%.

الخلاصة: لا يجب أن ينحصر الخط العلاجي القائم على التحرير الجراحي المفتوح للرباط الرسغي المعترض ضمن مجموعات الأعراض المتقدمة فقط. يجب استخدام المعالجة المحافظة فقط في حالات رفض الجراحة أو عدم قابلية إجرائها. لا ينصح التحرير باستخدام التنظير على الأقل في الوقت الحالي.

INTRODUCTION

Sixty years after Paget first described carpal tunnel syndrome (CTS) in 1854, Marie and Foix[1] suggested its relation to median nerve compression at the wrist. The first surgical release was by Learmonth[3] in 1933, while the term CTS was not popular before Phalen[2] in 1950. The diagnosis of the disease depends primarily on the patient's local symptoms and signs like paresthesias in the distribution of the median nerve and weakness of the affected hand, often made worse with activity. Proximal radiation of pain and parasthesia up to the shoulder at night is not uncommon,[4] while thenar atrophy points to advanced disease. A variety of provocative tests have been described to help confirm the diagnosis clinically. Phalen's test describes paresthesias in the median nerve distribution on flexion of the wrist with reproduction of the patients' symptoms within a minute, while Tinnel's sign describes tingling sensation on taping the nerve over the transverse carpal liga ment.

The usual management of CTS requires splinting the wrist in a neutral position to reduce or even relieve symptoms. An initial trial of full-time splinting for a month followed by part-time night splinting is recommended.[4] Non steroidal anti-inflammatory drugs may be prescribed even in the absence of acute inflammatory process.[5] In addition to its diagnostic importance, accurate local injection of corticosteroids into the carpal canal can be very useful. A good response to injection with immediate pain relief correlates well with an excellent response to subsequent surgery.[6] Recurrence of symptoms within the first three months can be expected in 65% to 90% of the patients, while 11% of them remain symptomless for up to 45 months. The simultaneous use of oral steroids, pyridoxine and diuretics may increase the degree of clinical improvement,[7] while local insulin injection in diabetics may potentiate their effect. If given in a frequency of 3 MHz at 1.0 W/cm^2 for five minutes daily for two weeks,[8] ultrasound treatment, due to thermal and nonthermal effects, gives satisfactory symptomatic relief. This occurs in early mild to moderate disease and is not associated with significant electro- physiologic changes.[10] This is augmented if combined with infra-red low intensity laser therapy.[9]

Other physiotherapeutic measures include eight weeks practice of yoga, carpal bone mobilization, magnetic therapy, laser acupuncture and chiropractic care. These were in vogue at a time, but did not demonstrate symptom benefit when compared to placebo.[7]

Surgery is indicated when non-operative management fails. Traditionally this has meant open division of the transverse carpal ligament under direct vision. The therapeutic outcome of surgery is better than other measures particularly for severe cases.[11] One of the important limitations in evaluating surgery is that patients could not be blinded to their treatment and are always biased.

Endoscopic carpal tunnel release is the latest innovation in CTS surgery.[12-14] The equipment required, is more expensive and takes longer time to set up in the operating room than that required for an open procedure, which adds to the total surgical cost. Incomplete release of the transverse carpal ligament requiring second open operation have been reported in patients,[13, 15] and in 50% of cadaver studies.[16] Added is the risk of injuring neurovascular structures in the hand, due to their close proximity to the carpal canal and occasional difficulty visualizing them. The ulnar and superficial palmar arch arteries and the common

digital nerve in the third web space are most at risk.[16] Contrary to open release bowstringing of the flexor tendons does not occur[12] and postoperative pain is less severe which facilitates an earlier return of grip strength, and an earlier return of the patient to work. It may not be the procedure of choice because of the consequent advanced thenar atrophy, tenosynovitis, and or mechanical problems.[17] Also it does not suit cases of failed open surgery.

PATIENTS AND METHODS

A total of 27 patients with CTS were enrolled in this study. This included 12 patients receiving conservative treatment (Group I), 9 patients receiving local steroid treatment (Group II) and 6 patients subjected to median nerve decompression by open surgery (Group III). Patients having the disease combined with obesity, cervical or dorsal spine problems, diabetes mellitus, myxoedema or pregnancy were excluded.

For patients of group I, 100 mg. of Aceclofenac 12 hourly were given for a month. The drug was selected because of its efficacy and its least side effects on elderly and hypertensive patients. To lessen gastrointestinal irritation; 150 mg of the H-2 receptors antagonist Ranitidine was given before bed time. Splinting the hand in 20 dorsiflexion continuously for a week and then at night for 3 weeks was part of the treatment For the patients of group II the previous treatment was combined with local injection of 40 mg Triamcinolone Acetonide mixed with 1 ml. Lidocaine 2% . The injection was precisely at the midpoint over the transverse carpal ligament to a depth of 1 cm, and repeated on day 15. Patients of group III were subjected to open surgical median nerve decompression by the second author.

Present pain intensity scale (*ppi*) and a dynamometer were used to assess improvement of pain and hand grip respectively. The *ppi* scale is a graphing rating scale with numerical values placed at equal distances along a line, from zero to four. Pain intensity is scored as being no pain = 0, mild pain =1, moderate pain =2, severe pain = 3 and unbearable pain as 4[18] and registered as a percentage. Hand grip strength measurements are done using a calibrated isometric hydraulic hand dynamometer with adjustable handle (Jamar) that displays grip force in pounds. The patient should be sitting, shoulder adducted with zero rotation and the elbow 90 degrees flexed. It is done three times consecutively and the average reading is taken as the patient's score. A score of 110 pounds for the right hand and 100 pounds for the left hand are considered normal if corrected to age.[19] Objective assessment was by median nerve conduction velocity study using computerised Tonnes Neuroscreen Plus 1.59, for electromyography with a stimulating unit amplifier and two electrodes. The test is done in an air-conditioned room.

Except three, all patients were males below 60 years and suffering from unilateral non-recurrent disease.

RESULTS

Forty patients were enrolled in the study at the start, but 13 were discarded found ineligible during investigations due to the presence of undiagnosed diseases as diabetes mellitus, cervical spondylosis, thyroid hypofunction or CTS proved bilateral. Only three of the patients were males (11%), and in only 4 of them (14.8%) the disease was affecting the left hand. The mean age was 34 years, but was noticeably lower in group III (with severest symptoms) than in the other two groups by 3 years.

Improvement after group specific treatment was assessed by Chi-square measurement where high values reflect better results. Conservative treatment in group I yielded negligible relief of pain and so in hand grip strength (36% and 0% respectively). In group II they were 75% and 12.8% respectively while in group III they were 82% and 20.5%. (Table I).

Parameter	Group	*Chi-Square*
Pain	I	12.12
	II	33.33
	III	74.58
Grip Strength	I	0
	II	4.85
	III	5.03

1- Chi-Square: Sum [(Before After)^2 / After]
2- Evaluation Criteria: better improvement is achieved with higher values of the square

Table 1: Chi- square values for the three groups.

DISCUSSION

CTS must be differentiated from other conditions that mimic its signs and symptoms as proximal or distal median nerve compression Proximal compression occurs in cervical disc herniation and thoracic outlet syndrome. Distal compression occurs in the forearm or at the elbow. [20] Thenar atrophy from other causes (disuse & neuropathies) and pain due to osteoarthritis of the first carpo-metacarpal joint are sometimes confused with CTS. The disease is sometimes associated with Trigger fingers and deQuervain's stenosing tenosynovitis.

The five risk factors listed by Kaplan[21] help physician to define more accurately patients likely to respond to non-surgical treatments. They include patient age greater than 50 years, the presence of symptoms for 10 months or more, constant paresthesias, the presence of stenosing tenosynovitis with associated trigger fingers and a positive Phalen's test in less than 30 seconds. Approximately 60% of patients were cured without surgery if they had only one risk factor, but 93% of those with 3 factors and 100% of those with 4 or more risk factors had unsuccessful non-operative management. In our series, where Kaplan's factors were not considered, the rate of pain improvement was only 36% after 6 months while for hand grip it was nil. This minimal improvement is probably attributed to splinting, as medical treatment alone is not more effective than placebo.[22] Doubling improvement rate in group II was simply achieved by adding intra-canal corticosteroid injection to conservative therapy, (70.2% and 5.78% for pain and hand grip strength). This result might suggest steroid injections to be limited to cases in which nerve entrapment is expected to be temporary,[4] as in pregnancy or when sufficient activity modifications can be made promptly to diminish the contributing stresses at the wrist. To avoid pain during injection, a local anaesthetic is added and effort should be paid to avoid the potential risk of median nerve injury, or injecting into a tendon leading to its rupture. For these reasons, an alternative approach was suggested where the drug is injected proximal to the tunnel rather than directly inside.[22] This also lessens concomitant swelling at the volar side of the forearm. Although more effective than non-steroidal anti-inflammatory drugs, orally administered steroids are not recommended for their serious side effects.

When non-operative management fails, surgical treatment is indicated. It should be always considered from the start in patients with severe symptoms even without trial of conservative therapy or local steroids. It is also indicated if severe median nerve entrapment is detected in conduction studies, in thenar muscle atrophy and in cases with evident motor weakness, as those patients appear to be the most likely to benefit from it. It is an outpatient procedure that can be performed using regional anesthesia. Operation entails division of the transverse carpal ligament under direct vision with an open procedure. It is important for the surgeon to recall the variable anatomy of the palmer cutaneous branch of the median nerve to avoid damaging it causing a painful neuroma. Also important is to consider the variations in the anatomy of the motor branch to the thenar muscles to avoid its injury[23]. Complications of the operation are rare but have been reported, including the devastating complete median nerve transection and massive necrosis of the palm.[24] Operation must be followed by splinting the hand for 3-4 weeks. In the present work, surgery, although kept for patients with severest symptoms, gave excellent results compared to conservative management after 6 months follow up, with no recurrence, denoting possible permanent cure. This conclusion is not in accordance with the previous reports that recommend keeping surgery for patients having severe symptoms only. It should be attempted in all cases having moderate to severe symptoms and conservative treatment should be resorted to for those having a contraindication to surgery or anesthesia, or if the patient refuses the operation.

The need for routine neurolysis and epineurotomy during operation has been debated in the literature[25]. Some surgeons perform them routinely, mimicing decompressive fasciotomy[26] Although early reports in the literature noticed some value in performing this in every decompression, yet in the light of available abundant data, none of them is needed routinely.[4] In the present study, surgical release did not attain the logic and expected 100% score, and we attributed this to omitting neurolysis and epineurotomy. For this reason we recommend their

routine use as integral steps of every open release. Other factors might also be responsible like reserving surgery for severe intractable cases only, and the reluctance to use neurotonic drugs postoperatively.

The cost of endoscopic surgery is prohibitory high and has many complications; one of them is the incomplete release of the ligament, a finding recorded in 50% of specimens in some series.[16] The incidence of iatrogenic neurovascular injury during endoscopic release is low, but was reported many times[27] and may be independent of operator's experience Some authors noticed that endoscopic release is more complex than open one and carries greater risk.[28] Time is needed to see whether the benefits of slightly less pain and transient grip strength differences reported by the advocates of endoscopic release will in the long run outweigh the risks of possible iatrogenic complications. Till that time, the open technique should be the standard.

CONCLUSION

A change in the current choice of treatment of CTS appears now crucial. Though three options are available, the choice of therapy should be thoughtful, as they yield unequal response. Conservative management may be tried for mild cases while local steroids nearly more than doubles the therapeutic relief, but needs experience to do. Conservative treatment does not suit patients with severe symptoms as open surgical release of the carpal ligament is the only reliable modality.

Not only because of its cost, but also for its unfavorable safety, endoscopic release is not a recommend alternative to open procedure.

Acknowledgement

The authors would like to thank Professor Dr Azza Moustafa, Faculty of Engineering Cairo University for partial participation.

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Original Article

موضوع أصيل

EVALUATION OF SERUM VITAMIN A AND URINARY IODINE LEVELS AMONG GOITROUS ADOLESCENTS IN MOSUL, IRAQ

تقييم مستوى فيتامين A في المصل ومستوى اليود في البول عند اليافعين المصابين بالدراق في مدينة الموصل – العراق

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ABSTRACT

Objectives: *To assess the frequency of endemic goiter in secondary school students in Mosul in northern Iraq and to compare serum vitamin A and urinary iodine excretion between goitrous and non-goitrous students.*

Methods: *This study was conducted in Mosul, Iraq from November 2002 through April 2004. A sample of 473 students (aged 13-20 years) from different schools of this area was selected and classified according to socioeconomic status. A pre-tested questionnaire was employed to obtain information on gender, birth date, height, weight, residence, habitual food consumption patterns, and socioeconomic status. Physical examination of the thyroid gland was then done including size, consistency, and grade. Casual morning urine and blood samples were collected from 200 students of the 473 students, 70 males and 130 females. Laboratory measurements for thyroid stimulating hormone (TSH), total thyroxin (T_4), vitamin A, serum protein, serum albumin, and urinary iodine and creatinine were performed.*

Results: *The students were initially divided into three groups according to grade of goiter. The frequency rate of goiter according to WHO criteria was 28.8% in females and 23.6% in males, with a higher frequency among females aged 17-20 years. Serum vitamin A levels in non-goitrous students (control group) were higher in females than in males and this difference persisted in different age groups. Urinary iodine excretion in the two age groups was higher in males than in females. Among goitrous students, urinary iodine excretion and serum vitamin (opposite of that observed in the control group) were higher in males than in females in the age group of 17-20 years. All the goitrous students had serum vitamin A<0.35 µmol/L, which is deficient according to WHO (1996) criteria. A highly significant correlation was observed in goitrous students between serum vitamin A and urinary iodine excretion (r=0.45, P<0.0001).*

Conclusion: *Goiter is still an endemic problem for secondary school students in Mosul in northern Iraq. Vitamin A and iodine deficiencies are common health problems in this area. It may be useful to measure serum iron and zinc in goitrous students and to clarify whether or not there is a correlation between these two parameters with serum vitamin A. and urinary iodine.*

ملخص البحث

هدف الدراسة: تقييم حالة الدراق المستوطن (السلعة الدرقية goiter) وتحديد نسبة حدوثه لدى طلاب المدارس الثانوية في الموصل في شمال العراق. كذلك لمقارنة تركيز فيتامين A في المصل واليود في البول بين الطلاب المصابين وغير المصابين بالدراق.

طريقة الدراسة: أجريت دراسة حالات مقارنة في مدينة الموصل في العراق في الفترة بين شهر 2002/11 و2004/4. شملت الدراسة 473 طالباً وطالبةً من المدارس الثانوية تراوحت أعمارهم بين 13–20 سنة، وصنفوا حسب المستوى الاجتماعي–الاقتصادي. استخدم استبيان للحصول على المعلومات حول الجنس وتاريخ الميلاد والطول والوزن ومكان الإقامة ونوعية التغذية والمستوى

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الاجتماعي-الاقتصادي. أجري فحص سريري للغدة الدرقية لتحري الحجم والقوام. تم جمع عينات الدم والبول الصباحي من 200 طالباً وطالبةً (70 ذكراً و130 أنثى). أجريت معايرات مخبرية لهرمون TSH، وT_4 وفيتامين A وبروتين المصل وألبومين المصل ويود وكرياتينين البول.

النتائج: تم تصنيف الطلاب إلى ثلاث مجموعات تبعاً لدرجة الدراق. كانت نسبة حدوث الدراق حسب معايير منظمة الصحة العالمية 28.8% عند الإناث و23.6% عند الذكور. كانت النسبة الأعلى عند الإناث بين 17-20 عاماً. كان مستوى فيتامين A في مجموعة الشاهد (غير المصابين بالدراق) أعلى عند الإناث. كان تركيز اليود في البول أعلى عند الذكور. عند الطلبة المصابين بالدراق، كان تركيز اليود أعلى في الذكور منه في الإناث في الفئة العمرية 17-20 سنة. بالنسبة لفيتامين A فقد لوحظ عكس ماهو موجود في مجموعة الشاهد بالنسبة للإناث والذكور. لوحظت مستويات منخفضة من الفيتامين A المصلي (<0.35 مكرومول/ل) عند جميع الطلاب المصابين بالدراق، كما أظهرت الدراسة ترابطاً ملحوظاً بين مستوى الفيتامين A المصلي والإطراح البولي لليود لدى هذه المجموعة ($r=0.45$، $p<0.0001$).

الخلاصة: إن الدراق المستوطن ما يزال مشكلة بين طلاب المدارس الثانوية في الموصل في شمال العراق، وإن عوز فيتامين A واليود هما مشكلتان صحيتان شائعتان في المنطقة، وقد يكون من المفيد قياس حديد وزنك المصل عند الطلاب المصابين بالدراق لتحديد علاقتهما بفيتامين A في المصل ويود البول.

INTRODUCTION

Deficiencies of iodine and vitamin A are important nutritional problems in most developing countries.[1] Although iodine deficiency is the main factor in the etiology of endemic goiter, vitamin A deficiency has been suggested as an instrumental factor in the etiology of endemic goiter.[2] These essential micronutrients, (vitamin A and iodine) are thought to be the most limited in diets of children in developing countries. Vitamin A deficiency is associated with deficiencies of other minerals such as iron and zinc.[3,4] Vitamin A deficiency can affect cells and organs throughout the body, with early changes in the epithelial cells of the respiratory, urinary, and intestinal tract. Resulting ocular changes are visible, and it is for this reason that they are used for the diagnosis of vitamin A deficiency.[5]

Goiter formation may be associated with both iodine deficiency and excess.[6] However, it is generally accepted that iodine deficiency is the dominant factor in the development of endemic goiter, although endemic goiter has been described in countries with adequate iodine supplies, and even in the presence of iodine overload.[7,8,9]

These findings would suggest that iodine deficiency may not constitute the only etiological factor for endemic goiter and probably factors other than iodine deficiency may contribute to the production of endemic goiter.[9,10]

The aims of the present study are to assess the frequency of endemic goiter in secondary school students in Mosul Province in northern Iraq, to measure serum vitamin A and urinary iodine excretion in goitrous in comparison to healthy non-goitrous students, and to establish the reference range for serum vitamin A and urinary iodine excretion among healthy non-goitrous adolescent students 13-20 years of age.

METHODS

This study was conducted in Mosul Province in northern Iraq from November 1, 2002 to April 30, 2004. Four hundred seventy three secondary school students aged 13-20 years were enrolled. These students were selected from two different socioeconomic districts and accordingly classified into two groups. Group 1, the control group, was composed of 100 students (35 males and 65 females) from higher socioeconomic districts. Group 2, from low socioeconomic districts consisted of 373 students (148 males and 225 females). These students were screened for the presence of goiter. Thirty five of the 148 male students were diagnosed clinically to have goiter; 65 of 225 females proved to have goiter. No visible or palpable goiter was detected in Group 1.

Classification of goiter was made according to WHO criteria as follows:[11,12]

Grade 0: No palpable or visible Goiter.

Grade 1: goiter that is palpable but not visible.

Grade 2: swelling in the neck.

A pretested questionnaire, which was designed to obtain information on gender, birth date, height, weight, residence, habitual food consumption patterns, and socioeconomic status, was used. Physical examination of the thyroid gland was then performed noting presence or absence of goiter, grade of goiter, consistency, and tenderness. In addition, signs and symptoms of vitamin A deficiency were included in the investigation including night blindness, respiratory disease, and keratinization of the skin[13,14,15].

A venous blood sample drawn from all subjects to determine of a number of tests. These included thyroid stimulating hormone (TSH) and total thyroxine (T_4) by radioimmunoassay using the immunoradiometric assay (IRMA) method.[16] Vitamin A was determined by the method described by Wootton.[17] This method depends on determining the optical density differences of serum extract before and after destruction of the vitamin A content by ultraviolet light irradiation. The result was obtained in terms of international units of vitamin A. Serum albumin was determined by the bromocresol green (BCG) dye binding method,[18] using a kit purchased from Randox Ltd, England. Total serum protein was determined by the biuret method, using kits purchased from Randox Ltd, England.[19] Twenty four hour urine samples were difficult to obtain and unnecessary.[11] Instead, morning casual urine samples were collected from all cases and controls in polyethylene bottles and centrifuged. The supernatant urine sample was used for creatinine measurement. Urine creatinine was measured spectrophotometrically using the Jaffe reaction,[20] by means of a kit purchased from Randox Ltd, England. Urinary iodine was determined using the sensitive colorimetry of the Sandell-Kolthoff reaction. The method is based on the catalytic role of iodine in the reduction of ceric ammonium sulfate to the cerous form (colorless) in the Presence of arsenious acid in the Sandell-Kolthoff reaction.[21]

Statistical analysis: Data were analyzed using the Statistical Packages for Social Sciences (SPSS version 10). Unpaired *z*-test was used to assess the significance of difference between mean values. Linear regression analysis was performed to find the relationship between the dependent and independent variable and Duncan's test was used to identify group(s) responsible for statistical difference in comparison, following ANOVA. All value are quoted as the mean ± SD. Differences between observation were considered significant at $P < 0.05$.[22]

Ethical considerations: This study was approved by the Scientific Committee in the Department of Clinical Biochemistry, College of Medicine, University of Mosul. Verbal consent was obtained from the study subject or from the parent before enrollment in the study.

RESULTS

The results of data analyzed are presented according to the grouping of students. The students were initially divided into three groups according to the grade of goiter depending on criteria of WHO (2001).[11]

Group 1. Students with Grade O Goiter (Non-Goitrous Control): This group included 100 apparently healthy students, 65 females and 35 males, aged 13-20 years. Each of them was chosen from high socioeconomic school districts (and selected to have urinary iodine concentration≥ 100 µg/L). The mean ± SD urinary iodine concentration in this group was 158.50 ± 20.29 µg/L with a median of 160.86 µg/L. The mean ± SD serum vitamin A of this group was 0.83 ± 0.17 µmol/L with median 0.82 µmol/L. These were normal values according to WHO criteria.[23]

Establishment of Reference Range for Serum Vitamin A: The frequency distribution of serum vitamin A among the non-goitrous students showed a normal pattern of distribution (Gaussian distribution) with skewness to the left of 0.97, Figure 1. The

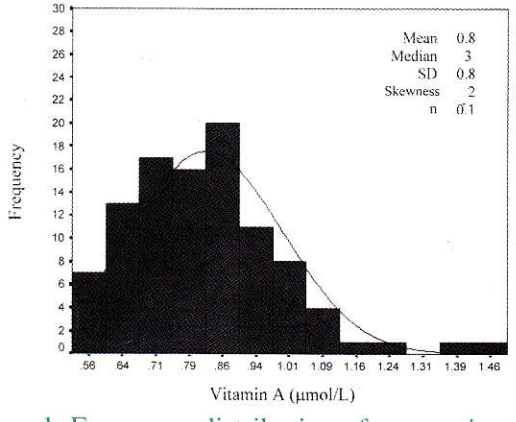

Figure 1. Frequency distribution of serum vitamin A in non-goitrous (group 1) students.

reference range (95th confidence limit) was calculated as mean ± 2SD, and it ranges between 0.49-1.17 µmol/L.

Establishment of Reference Range for Urinary Iodine Concentration: The frequency distribution of urinary iodine concentration among the control group of students showed a normal pattern of distribution (Gaussian distribution) with skewness to the right of -0.14, Figure 2. The reference range (95th confidence limit) was calculated as mean ± 2SD and found to be 117.9-199 µmol/L.

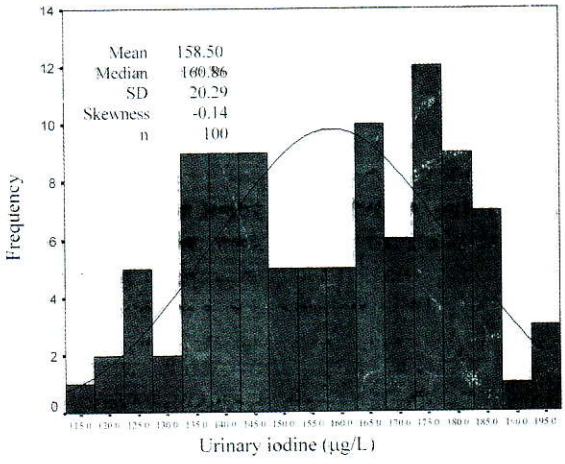

Figure 2. Frequency distribution of urinary iodine in non-goitrous (Group 1) students.

The results of biochemical parameters according to the grades of goiter are shown in Table 1.

Group 2 represents students with grade 1 goiter according to WHO criteria.[24] This group included 93 students: 58 females (62.4%) and 35 males (37.6%)

Group 3 represents students with grade 2 goiters according to WHO criteria.[24] This group included seven students, all were females.

Goitrous cases in Groups 2 and 3 (93+7) were subdivided into two age groups as were the non-goitrous (Group 1) students. All had serum vitamin A concentration < 0.35 µmol/L. They were considered as vitamin A deficient field according to WHO criteria.[23]

A comparison of biochemical parameters, according to age and sex was done, and revealed significant differences in serum vitamin A and urine iodine in both sexes in the second age group (17-20), $P < 0.05$ Table 2. A comparison of the results of biochemical assay between both sexes in the two age groupings of goitrous cases has shown in Table (2).

The frequency rate of goiter formation was calculated separately among males and females and it was 23.6% in males and 28.8% in females, indicating a higher rate of goiter formation among females than that in males and a higher frequency in the older age group (17-20 years) than younger subjects. Figure 3.

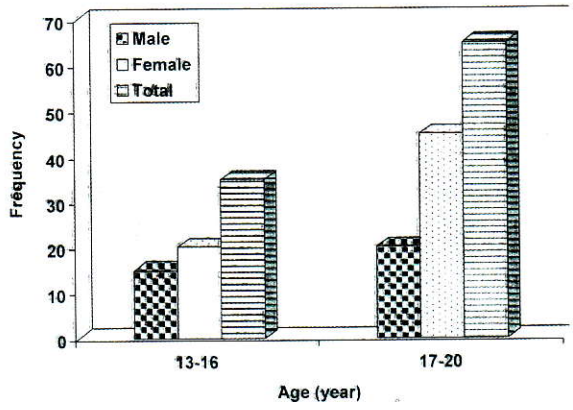

Figure 3. Frequency of goiter according to age and sex.

A comparison of biochemical parameters between non-goitrous students (Group 1) and goitrous students (Groups 2 and 3) according to age revealed a significant difference in serum TSH for the younger age group (t=7.2, P<0.0001) and for the older age group (t=9.8, P<0.0001). The same significant difference was observed for urinary iodine (t=7.2, P<0.0001) concentration for the younger group and for the older group (t=9.8, P<0.0001). In the case of serum albumin, there was a significant difference in its values between males and females in both age groups, where (t=3, P<0.01) for females in the younger age group, t=3.7, P<0.0001) for males in the older age group, and for females in the same age group (t=7.2, P<0.0001). While for males in the first age group, there was no significant difference in its value among goitrous cases and non-goitrous control. Total serum protein values showed a significant difference in the older age group (t=4.4, P<0.0001). In the younger group, no significant difference was observed (P>0.05). A significant difference was observed in both age groups for urine

creatinine, t=3.2, P<0.01, in the younger age group, and t=5.8, P<0.0001 in the older. There were no significant differences in serum TSH values in both age groups for both sexes. All goitrous cases of the population study were represented in euthyroid goiter field, Table 2. Duncan's test was used after ANOVA analysis in order to compare all the parameters among the subjects in the three grade categories. This test revealed a significant difference in serum vitamin A (F = 94.34, P < 0.0001), serum albumin (F = 56.59, P< 0.0001), serum total protein (F=7.95, P<0.0001), urinary iodine concentration (F=80.68, P<.0001) and urine creatinine (F=25.53, P<0.0001) with the exception of serum TSH which revealed no significant difference among students of the three groups (grades).

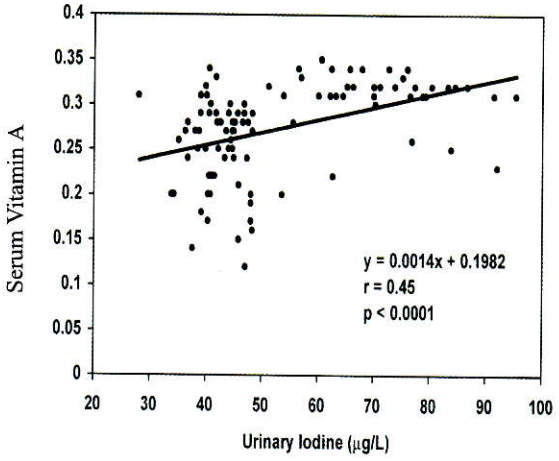

Figure 4. Relationship between serum vitamin A and urinary iodine in goitrous cases (Groups 2 and 3).

Parameters	Mean ± SD				
	Grade = 0 (n=100)	Grade = 1 (n=93)	Grade = 2 (n=7)	*F* Value	*P* Value
Serum TSH (mU/L)	1.79±0.13	2.12 ± 0.32			
Serum VA (µmol/L)	0.83 ± 0.02	0.28 ± 0.02	0.21 ± 0.02	94.34	<0.0001
Serum Albumin (g/L)	47.51 ±0.23	42.28 ± 0.67	31.78±0.62	56.59	<0.0001
Total serum protein (g/L)	81.34 ±0.52	78.30 ±0.65	76.16 ± 3.12	7.95	<0.0001
Urinary iodine (µg/L)	158.50 ±2.03	54.48 ±1.76	41.12±2.18	80.68	<0.0001
Urine creatinine (g/L)	1.31±0.03	1.08±0.02	1.02±0.05	25.53	<0.0001

Table 1. Comparison of biochemical parameters according to the grades of goiter in non-goitrous (grade 0) (n =100) and goitrous (grade 1 and 2) students (n= 100)

Age (year)	Parameters	Mean ± SD (Male)		Mean ± SD (Females)		Mean ± SD (Males + females)	
		Control	Patients	Control	Patients	Control	Patients
13-16	Serum TSH (mU/L)	1.31 ±0.35	2.03 ± 0.60*	1.90 ± 1.01	2.38 ± 0.31*	1.79 ± 0.93	2.22 ± 0.60*
	Serum VA (µmol/L)	0.75 ± 0.10	0.29 ± 0.22***	0.82 ± 0.14	0.27 ± 0.12***	0.80 ± 0.14	0.28 ± 0.09***
	Serum Albumin (g/L)	47.5 ± 2.6	44.9 ± 4.16	47.3 ± 1.9	43.6 ± 5.7**	47.3 ± 2.1	44.1 ± 5.1**
	Serum Total protein (g/L)	78.30 ± 10.78	79.00 ± 6.53*	81.51 ± 3.86	78.14 ± 7.86*	80.60 ± 6.59	78.50 ± 7.23*
	Urinary iodine (µg/L)	167.3 ± 21.0	51.60 ± 16.4***	157.1 ± 19.7	53.0 ±14.6***	160.0 ± 20.3	52.4 ± 15.2***
	Urine Creatinine (g/L)	1.41 ± 0.37	1.04 ± 0.12**	1.20 ± 0.22	1.11 ± 0.21*	1.26 ± 0.28	1.08 ± 0.18**
17-20	Serum TSH (mU/L)	2.18 ± 0.64	1.69 ± 0.88*	1.60 ± 0.75	2.44 ± 3.05*	1.79 ± 0.76	2.07 ± 2.22*
	Serum VA (µmol/L)	0.78 ± 0.19	0.29 ± 0.13***	0.88 ± 0.17	0.26 ± 0.15***	0.84 ± 0.18	0.27 ± 0.41***
	Serum Albumin (g/L)	47.9 ± 2.3	44.6 ± 3.7	47.4 ± 2.4	38.3 ± 7.6***	47.6 ± 2.4	40.2 ± 7.3***
	Serum Total protein (g/L)	82.33 ± 2.77	77.72 ± 4.68	81.38 ± 4.95	78.06 ± 6.51**	81.75 ± 4.25	77.96 ± 5.97***
	Urinary iodine (µg/L)	161.5 ± 19.7	55.57 ± 16.6	155.3 ± 20.6	52.7 ± 16.6***	157.7 ± 20.4	53.3 ± 16.5***
	Urine Creatinine (g/L)	1.44 ± 0.32	1.11 ± 0.22	1.28 ± 0.23	1.06 ± 0.14***	1.34 ± 0.28	1.08 ± 0.17***

*not si gnificant at P>0.05
** Significant at P < 0.001
*** Highly significant at P < 0.0001

Table 2. Comparison of biochemical parameters according to age group for both sexes between non-goitrous (Group 1) (n=100) and goitrous (Groups 2 and 3) (n = 100).

The relation between serum vitamin A and urinary iodine concentration was studied in both non-goitrous significant correlation was observed where (r =-0.12, P>0.05); among goitrous students, there was a (Group 1) and goitrous students (Group 2 and 3) using linear regression analysis. In non-goitrous students, no significant correlation between the two parameters (r=0.45, P<0.0001), Figure 4.

DISCUSSION

Goiter is an endemic health problem worldwide including Iraq, particularly in the northern area.[7,25] The first survey in Iraq was carried out in 1965 and revealed a high prevalence of goiter among school girls in Mosul. Later on, in 1993, 1994, and 1998, further surveys were done in the same area and revealed a different high prevalence rate.[20] Analysis of these surveys concluded that iodine deficiency was the most common cause of this endemicity.[26] Goiter is especially seen in school age children because of the relatively high need for thyroxine to regulate growth, and it is also the period of increasing demand for vitamin A.[27,28,29] For this reason, school age children are usually the first group to be examined to assess iodine deficiency.[11]

In Mosul, low iodine in water[30] and low consumption of fish from the Tigris River,[31] in addition to high consumption of goitrogens in this area such as cabbage, turnips, cauliflower, and peanuts[31,32] have all contributed to the endemicity of goiter in this area. The clinical disorders of iodine deficiency tend to be more profound in geographic areas associated with co-existing vitamin A deficiency and in regions where goitrogens are major staples of the diet because vitamin A deficiency exacerbates the effect of iodine deficiency.[33.]

The frequency of goiter formation among females in Groups 2 and 3 was 28.8%, while among males in the same groups it was 23.6%. This higher rate among females may be due to the higher demand for thyroid hormones in females than in males in this period of life. This may be reinforced by the results of the measurement of urinary iodine excretion in the non-goitrous control group where higher values were detected in males than in females. These results were in agreement with reports conducted by, Harbawi *et al*, Al-Jawadi, Ghalioungu *et al,* and Hassan.[28,30,31, 34]

The present study revealed that the severity of urinary iodine deficiency is higher in females according to the grade of goiter especially in the older age group (17-20 years), and, in accordance with this, the severity of vitamin A deficiency was greater in females than in males in those having goiter. Iodine deficiency is a possible factor in goiter formation; the degree of deficiency noted in this study was mild to moderate. This is in contrast to the finding of Elnour *et al*[2] who reported goiter developing in iodine sufficient subjects. On the other hand, Gebrial *et al*, Ghalioungui *et al*, and Ingenbleek and Visscher, [1,31,35] did not investigate serum vitamin A, but reported that factors other than iodine can contribute to goiter formation.

In fact, vitamin A deficiency will aggravate goiter and may change it from a euthyroid condition to subclinical hypothyroidism. Vitamin A is needed for the synthesis of protein and glycoprotein. Since thyroglobulin is a glycoprotein, its synthesis may be impaired in vitamin A deficiency, leading to deficient production of thyroid hormones due to defective mannosylation, related to the conformational changes and iodination abnormalities[36]

According to the data of the present work, subjects included in this study were of three categories:

* Subjects showing elevation in serum TSH (4.442 ± 0.18 mU/L) and elevation in serum TT_4 (181.73 ± 7.47 nmol/L). The probable cause of this phenomenon is the fact that a lack of vitamin A may result in the reduction in the concentration of thyroid hormone receptors in the TSH-secreting cells. These cells may be unable to respond to the high level of circulating thyroxine resulting in deranged homeostasis. This may explain the greater requirement for vitamin A in hyperthyroid cases.[37] Such cases may exhibit hyperthyroid manifestations in the future.
* Subjects showing an elevation in serum TSH (6.54 ±2.42 mU/L) with normal serum TT_4 (115.94 ± 29.55nmol/L). This group is subclinically hypothyroid according to the WHO and the International Council for Control of Iodine Deficiency Disorders (ICCIDD) criteria.[5] This is also in accordance with the research of Centanni *et al.*[38] A possible explanation is the major role of vitamin A in the synthesis of thyroglobulin as a glycoprotein. Its deficiency may lead to impaired production of thyroid hormones.

* Subjects showing normal serum TSH (1.83 ± 0.82mU/L) with normal to slightly elevated serum T T_4 (166.07 ± 46.42). This group comprised 27 (77%) of 35 cases and was considered euthyroid goiter according to WHO and ICCIDD criteria.[5] This result agrees with that stated by Centanni *et al.*[38] Those goiter cases with a slight elevation in serum TT_4 may belong in the euthyroid category.

This study revealed a positive correlation between goiter formation, vitamin A deficiency, and urinary iodine deficiency which is consistent with the published reports of Kimiagra *et al*, Mesaros *et al*, and Florentino *et al.*[39,40,41.]

CONCLUSION

This study demonstrated that goiter remains an endemic problem for secondary school students in Mosul, Iraq. Euthyroid goiter is the endemic form. Vitamin A and iodine deficiencies are common health problems in this area. Further studies may be useful to measure serum iron and zinc in these goitrous students and to ascertain if there is a correlation between these two parameters with serum vitamin A and urinary iodine.

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Original Article

موضوع أصيل

MANAGEMENT OF OVARIAN CYSTS IN POSTMENOPAUSAL WOMEN

تدبير كيسات المبيض لدى النساء بعد سن الإياس

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ABSTRACT

Background: *Ovarian cysts in postmenopausal women are not uncommon and the majorities are asymptomatic. The primary goal in case of an ovarian cyst in a postmenopausal woman is to exclude malignant disease. Evidence is emerging that most of theses ovarian cysts in postmenopausal women are benign, and many of these cysts resolve spontaneously. Therefore, surgical exploration of these cysts in postmenopausal women, who might have multiple co-morbidities, can be avoided in a large proportion of these patients. The aim of this review was to provide an evidence-based guideline about the management of ovarian cysts in postmenopausal women according to clinical, ultrasonographic, and biochemical features.*

Methods: *Articles concerning ovarian cysts in postmenopausal women from a MEDLINE literature search for the past 10years were included.*

Results: *Using different imaging tools and serum marker CA125 are used. Size and consistency of the cyst found on different ultrasound modalities. Scoring system as well was discussed. Basically, cysts, which are asymptomatic with benign appearing criteria on ultrasound and Doppler in addition to normal CA125, can be managed conservatively by repeated ultrasound and CA125, majority of cysts in postmenopausal women are benign and disappear spontaneously. Operative laparoscopy can be safely used to remove persistent cyst with normal CA125.Suspecious cyst by imaging and elevated CA125 should be manage in the traditional way as ovarian cancer.*

Conclusion: *Discrimination between benign and malignant ovarian cyst is challenging. No single test can achieve this, for this reason multiple diagnostic modalities can be used together to optimize the accuracy of prediction of malignancy in a cyst. More work is needed on Doppler and three-dimensional ultrasound hoping to improve the sensitivity to discriminate between benign and malignant cysts in the future.*

ملخص البحث

خلفية الدراسة: لا تعتبر كيسات المبيض عند النساء بعد سن الإياس من الحالات غير المألوفة في الممارسة الطبية، كما أن معظم هذه الكيسات تكون لاعرضية. الهدف الأساسي في مقاربة حالة كيسة مبيضية لدى امرأة بعد سن الإياس هو نفي وجود خباثة. تتوارد حالياً أدلة على أن معظم الكيسات المبيضية الملاحظة عند النساء بعد سن الإياس هي كيسات سليمة، كما أن معظمها يتراجع بشكل عفوي، وبهذا يمكن تجنب إجراء الاستقصاء الجراحي في نسبة كبيرة من هذه الكيسات عند النساء بعد سن الإياس- اللواتي قد يكون لديهن أمراض أخرى مرافقة-. تهدف هذه المراجعة الدراسية إلى تقديم توجيهات مدعومة بأدلة موثقة حول تدبير الكيسات المبيضية عند النساء بعد سن الإياس وذلك بالاعتماد على المظاهر السريرية، الكيميائية الحيوية، والمظاهر الملاحظة بالأمواج فوق الصوتية (الإيكو).

طريقة الدراسة: تم تضمين المقالات الواردة حول موضوع الكيسات المبيضية عند النساء بعد سن الإياس خلال السنوات العشر الأخيرة من خلال البحث عبر النشرات الطبية MEDLINE .

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النتائج: تم استخدام وسائل شعاعية مختلفة، الواسم المصلي CA 125، المعلومات المتوافرة حول حجم ومحتوى الكيسة من خلال الوسائل الشعاعية، كما تمت مناقشة منظومة نقاط حول كل حالة. إن الكيسات اللاعرضية والتي تبدي معايير سلامة من خلال التصوير بالأمواج فوق الصوتية (الإيكو) والدوبلر بالإضافة إلى قيم طبيعية لمستوى CA 125 في المصل يمكن مقاربتها بشكل محافظ من خلال متابعة دورية بإجراء تصوير بالأمواج فوق الصوتية ومعايرة مستويات CA 125 في المصل، حيث أن معظم هذه الكيسات عند النساء بعد سن الإياس هي كيسات سليمة تتراجع عفوياً. كما يمكن استخدام تنظير البطن الجراحي بشكل آمن لاستئصال الكيسات التي يستمر وجودها مع بقاء قيم CA 125 طبيعية. أما الكيسات التي يشتبه بها من خلال الفحوص الشعاعية أو ارتفاع مستويات CA 125 فيجب مقاربتها بالطريقة التقليدية كما في حالات سرطان المبيض.

الخلاصة: ينطوي التمييز بين الكيسات المبيضية السليمة والخبيثة على تحدٍّ كبيرٍ للأطباء، كما أنه لا يوجد اختبار يحقق بمفرده هذه الغاية، ولهذا يجب الاعتماد على عدة طرائق تشخيصية مختلفة للوصول للدقة المثلى في تنبؤ وجود خباثة ضن هذه الكيسات، كما يجب بذل المزيد من الجهود في مجال الإيكو دوبلر والإيكو ثلاثي الأبعاد على أمل تحسين حساسية تمييز الكيسات السليمة والخبيثة في المستقبل.

INTRODUCTION

Ovarian cysts in postmenopausal women are not uncommon and the majority is asymptomatic. Screening studies have found that 3-5% of asymptomatic postmenopausal women had an ovarian cyst detected by ultrasound. [1, 2] With the increased use of transvaginal ultrasound as an additional diagnostic tool to regular pelvic examination, ovarian cysts are detected more frequently even if they are small in size. The primary goal in case of an ovarian cyst in a postmenopausal woman is to exclude malignant disease.

The lifetime risk of developing ovarian cancer in the general population is about 1.7%.[3] Due to the fact that the majority of ovarian cancers are diagnosed in postmenopausal women,[4] some authors argue that all ovarian cysts in postmenopausal women are highly suspicious for ovarian cancer until proven otherwise, and subject these women to surgery.[5,6,7] Therefore, in order to rule out ovarian cancer, traditionally explorative laparotomy and oophorectomy has been recommended for these women by some experts in the field.[8] However, evidence is emerging that most of theses ovarian cysts in postmenopausal women are benign, and many of these cysts resolve spontaneously. Therefore, surgical exploration of these cysts in postmenopausal women, who might have multiple comorbidities, can be avoided in a large proportion of these patients. In order to differentiate between most likely benign or malignant ovarian lesions the individual history, physical examination as well as serum analysis and imaging must strongly be taken into account.

The purpose of this review is to provide an evidence-based guideline about the management of ovarian cysts in postmenopausal women according to clinical, ultrasonographic, and biochemical features.

For most of the 20th century, ovarian cancer was depicted as an insidious, silent disease that offered few clues to early diagnosis.[9] Most patients experienced symptoms, often non-gynecologic nature, for months prior to diagnosis. Olsone et al. found that patients with advanced ovarian cancer reported a mean duration of 5.6 months of "unusual abdominal or lower back pain", and 4.5 months of "unusual bloating, fullness and pressure in the abdomen or pelvis" before diagnosis.[10] Consequently, delayed diagnosis may occur if diagnostic tests were initiated but failed to include tests that are capable of rendering the correct diagnosis.[11-14] From this data, we conclude that appropriate history and thorough physical examination is essential to pick up disease early and consequently this will affect the management plan in form of proper imaging and serological tests essential for the diagnosis.

ULTRASONOGRAPHY

It is well documented that pelvic examination is inadequate in assessing ovarian size, particularly in women who are overweight or have an enlarged uterus.[9] Therefore ultrasound is often used in addition to clinical examination in these patients.

The introduction of transvaginal ultrasound has greatly changed the negative attitude of many

gynecological oncologists towards the possible role of ultrasound in the diagnosis of ovarian masses.[15-19] In many cases, the high resolution of this imaging technique apparently enables us to define the gross anatomy of ovarian lesions. Compared to conventional transabdominal ultrasound, transvaginal ultrasound has demonstrated considerable advantage regarding the pelvic anatomy. In cases of very large tumors, however, transabdominal ultrasound is still useful in addition.

Up to date no single characteristic feature can discriminate between benign and malignant ovarian masses. Several morphological features have to be used to characterize an ovarian mass and evaluate the risk of malignancy. By reviewing the current available literature many investigators outline some characteristics to distinguish between benign and malignant ovarian masses using conventional ultrasound, Doppler and 3-Dimensional ultrasound. Some developed scoring systems using several parameters to distinguish between benign and malignant.

SIZE

The risk of malignancy in case of a cystic ovarian lesion less than 5 cm in diameter is essentially none existent. Modesitt et al monitored more than 3000 postmenopausal women with unilocular ovarian cysts, of which the majority was less than 5 cm in diameter by transvaginal ultrasound at 6-month intervals for an average of 6 years, and demonstrated that 70% of these unilocular ovarian cysts resolved spontaneously, and none of the patients developed ovarian cancer[20]. Baily et al detected 256 unilocular cystic ovarian lesions less than 10 cm in diameter in 7705 asymptomatic postmenopausal women undergoing ultrasound screening. Approximately half of these lesions resolved spontaneously; 45 women underwent excision of persisting lesions and none of these cysts revealed ovarian cancer; Eighty-six women with unilocular cystic ovarian lesion elected to defer surgery and were monitored every 3 to 6 month with repeated ultrasound examination. None of these women had ovarian cancer developed in the 3-year follow up period.[21] Cyst size cannot be used alone to differentiate between benign and malignant cysts and other parameters has to be used along with this parameter.

ECHOGENICITY

It is well known that solid structures within a cyst are associated with an increased risk of ovarian cancer.[9] Echo-free described the cyst that is clear, simple not complex or translucent. Modesitt et al. studied 3259 unilocular ovarian cysts. No women with a persistent unilocular ovarian cyst developed ovarian cancer in this population.[20] Nardo et al. studied 226 postmenopausal women retrospectively, with unilocular ovarian cysts and a 5-year follow-up. The majority remains unchanged.[27] Several studies have been published in the last decade addressing the natural history of simple cyst in postmenopausal women.[2,28-36] Simple cyst in postmenopausal women could be related to the time elapsed from menopause; the younger the women, the higher prevalence. Other factors that potentially might affect the prevalence of simple cyst in postmenopausal women are the use of HRT. [20,37] The most important question regarding simple ovarian cyst in asymptomatic postmenopausal women is the potential risk of malignancy, recent studies show that the risk is below 1%.[28-36]

WALL THICKNESS AND STRUCTURE

In accordance to the size and echogenicity, wall thickness and structure alone can not reliably discriminate between benign and malignant ovarian cysts. This is demonstrated by the study of Granberg et al. who found that wall thickness or presence of septae cannot discriminate between benign and malignant cysts.[24]

Regarding the wall structure papillary formations are associated with an increased risk of malignancy (1.6 to 10% in patient with unilocular cysts) (38). Many authors have studied wall thickness as well as structure of a cyst as part of a scoring system.[41-45] They used a cut-off of 3 mm thickness and included the absence or presence of papillary projections. The higher the score, the greater the risk of an ovarian cancer. So, wall thickness alone cannot predict the possibility of cancer in a cyst. On other hand, Papillary projections on the cyst wall are more predictor of malignancy if coupled with extra studies like Doppler flow.

Marret et al found that papillary formations on the inside of the cyst wall and mass within a non hyper-echoic solid compartment are the most statistically significant predictors of malignant ovarian masses.[39] When gray-scale ultrasonography detects the presence of a septum, papillary projections or a solid component in an ovarian cyst and Doppler flow is present within these lesions malignancy is likely [40]

SCORING SYSTEMS

Several researchers have claimed that ultrasound can accurately predict benign cystic masses in the majority of postmenopausal women. Various scoring system have been developed in order to differentiate between benign and malignant cyst.

Ultrasound features of ovarian cysts like wall thickness, septa and vegetations were used for scoring system in a multicenter study by Ferrazi et al, 330 ovarian lesions were studied. In this study the diagnostic accuracy for detecting an ovarian malignancy with a cut-of value of 8 for lesions $\leq$ 5 cm was: sensitivity 92%, specificity 53%, positive and negative predictive values 29% and 97%, respectively.[45] Scoring systems are subjective evaluation of the ovarian cysts defining them as "probably benign", and "suspicious/probably malignant" but cannot be used alone. The combined use of morphological scoring and CA125 achieved higher specificity and positive predictive values.

DOPPLER FLOW STUDIES

The introduction of color Doppler, with its potential to identify neoangiogenesis in neoplasm, to a large extent has diverted the attention of researchers away from the advantages of a simple and reproducible morphological scoring system.[46] The use of Doppler flow studies of ovarian vasculature as a mean to differentiate benign from malignant is based on the observed difference in resistance to flow between vessels supplying normal ovarian tissue and those associated with ovarian malignancies. Vessels supplying benign ovarian tumors are in general peripheral in location and have a high systolic flow, while vessels supplying ovarian malignancies generally have in addition a significant diastolic flow and are more centrally located .[47]

However, more recently studies indicated that there is a significant overlap in Doppler flow indices between benign and malignant ovarian tumors, thus it is difficult to clearly identify ovarian malignancies on the basis of Doppler findings alone. [48,49]

Most of the comparison studies have found conventional sonography to be superior to Doppler sonography in terms of differentiating benign from malignant; however, a few studies found that Doppler sonography was superior.[50-53] In a meta-analysis of the effectiveness of different ultrasonographic techniques to characterize ovarian cysts. Kinkel et al found in 46 studies (5159 cyst included) that there were significantly better results from combining techniques than for morphologic information alone.[54] We conclude that color and pulsed Doppler can improve preoperative diagnosis of ovarian cyst when compared to transvaginal sonograpgy alone.

THREE-DIMENSIONAL SONOGRAPHY

Recently three-dimensional sonography has become more popular and some investigators tested its accuracy in terms of differentiating between benign and malignant tumors in comparison to conventional sonography. In a recent study transvaginal color Doppler and three-dimensional power Doppler sonography were performed in 120 patients with ovarian lesions. A scoring system combining morphologic and Doppler parameters was used for two- and three-dimensional sonography examination. In this study each of 11 ovarian malignancieswas preoperatively diagnosed by three-dimensional power Doppler sonography. In contrast, conventional transvaginal color Doppler sonography missed one case of a serous cystadenocarcinoma, while three benign lesions were considered false positive. Improved recognition of ovarian lesion anatomy, characterization of surface features, detection of tumor infiltration, and precise depiction of size and volume might explain these results. Three-dimensional power Doppler sonography can enhance and facilitate the morphologic and functional evaluation of both benign and malignant ovarian lesions.[55]

TUMOR MARKER

Although a variety of tumor markers associated with ovarian cancer exists, Cancer antigen 125(CA125)

seems to be the most important one (normal value <35U/ml) as CA125 is elevated in 80% of women with ovarian cancer (56). According to disease stage, the average reported sensitivities for early stage disease are 50%, and for advanced stage disease almost 90% (57). However, regarding specificity, CA125 can also be increased in other malignancies, including endometrial cancer and certain pancreatic cancers; furthermore, it can be elevated in a variety of benign conditions, such as endometriosis, uterine leiomyoma, and pelvic inflammatory disease; finally it is estimated to be elevated in approximately 1% of otherwise healthy women. Due to the fact, that most of these conditions occur only in premenopausal women, in whom the risk of ovarian cancer is quite low, measurement of CA125 is not a useful diagnostic screening test in premenopausal women.

In contrast, it seems to be useful in postmenopausal women, in whom it has a positive predictive value of 97% for malignancy (58). Thus, postmenopausal women with an ovarian lesion considered to be suspicious for malignancy by sonography should have a CA125 measurement (48). Regarding an appropriate cut-off level in order to differentiate between benign and malignant, the majority of investigators used a cut-off level of 35u/ml,[20,26,27,42] whereby others investigators used a cut-off level of 65 u/ml.[49] In a multinstitutional trial from the United States, Baron et al reported, that a cut-off level of 135u/ml was necessary in order to achieve a specificity of 100% in terms of distinguishing ovarian neoplasm.[59]

Recent data suggest that serial tumor marker levels may be more effective than a single threshold value in distinguishing benign from malignant ovarian tumors. Generally serum CA125 rises over time in patients with ovarian cancer, whereas it remains stable or decreases in patients with benign ovarian tumors. Skates et al were able to increase the sensitivity of ovarian cancer detection from 62 to 86% by using serial CA 125 measurements at 2 to 4 weeks intervals.[60]

TREATMENT

An effective system for predicting risk of malignancy in ovarian tumors allows proper individualization of treatment, including observation, laparoscopic tumor removal, or exploratory laparotomy with tumor debulking and staging if indicated. There is no ideal test alone to distinguish benign from malignant tumors. However, using a combination of characteristic ultrasound features and CA125 levels, prediction of dignity in case of an ovarian cyst in postmenopausal women can be achieved in 99.5%.[42, 52]

Conservative management can be offered to patients without any suspicious ultrasound feature (complex cyst, multilocular, abnormal Doppler flow) of the cyst along with a normal CA 125. Follow up every six months by transvaginal ultrasound and CA125 is an acceptable option. During follow up many of these cysts resolve spontaneously. If any increase in size, development of wall projections or a rise in CA125 occurs, surgery is warranted.

Cyst aspiration under ultrasound guidance should be avoided due to the risk of tumor cell spillage in case of malignancy, which would result in upstaging the tumor in early stage disease. In one randomized controlled study including 278 women with a unilocular ovarian cyst, the authors demonstrated that cyst puncture as compared to observation did not have an impact on management as well as outcome.[61]

Ovarian lesions, which are not suspicious for being malignant, can be safely managed by laparoscopy. In a randomized trial comparing laparoscopy versus laparotomy in 102 patients with ovarian masses, laparoscopy was associated with a significant reduction in operative morbidity, postoperative pain, and length of hospital stay and recovery, without increasing the risk of spillage of cyst contents.[62] In a recent retrospective study, operative laparoscopy was performed in 219 patients. Laparoscopy was successfully completed in 213/219 (97.3%) patients without the need to convert to laparotomy. Among the six patients requiring laparotomy, five cases were converted

Electively at the discretion of the surgeon, and one case was converted based on the frozen section reporting a borderline ovarian malignancy that required staging laparotomy. The authors concluded that laparoscopic surgery for postmenopausal women is technically feasible; with low rate of morbidity and short hospital stay.[63]

DISCUSSION

The pre-operative diagnosis of ovarian cancer is still one of the hardest tasks in gynecology, and the search for optimal diagnostic tools should continue. Accurate preoperative discrimination between benign and malignant ovarian cysts remains difficult despite recent advances in medical imaging. Reliable prediction of the nature of an ovarian cyst is of crucial importance for treatment. Preoperative detection of malignancy would allow selective referrals to the appropriate centers for optimal care, whereas women with benign cysts could be offered more conservative treatment. The opinion of the affected woman is clearly another important component when the strategy for management of a unilocular cyst needs to be settled. Hopefully, in the future discrimination between benign and malignant cysts can be improved, in order to avoid unnecessary surgery for functional cysts, and to elect the right surgical setting for women with ovarian cancer.

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Original Article

موضوع أصيل

SUCCESSFUL MANAGEMENT OF CHYLOUS ASCITES USING OMENTAL PATCH

التدبير الناجح للحبن الكيلوسي باستخدام لصاقات من الثرب

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د. عبد القادر زنكنة

ABSTRACT

Objective: *To assess possible factors that may play a role in the etiology of chylous ascites formation, to determine the management of each type according to its causation, and to compare between the results of conservative and operative management.*

Methods: *This is a prospective study conducted from 1990 to 2004 in the surgical department of Erbil Teaching Hospital Erbil, Iraq. A group of 46 patients with chylous ascites were subdivided into five subgroups according to the etiological factors. The initial assessment included: age, sex, history of trauma and previous surgery, time between the trauma, if it was present, and the appearance of chylous ascites, and aspiration of ascitic fluid for chemical and bacteriological analysis. Further assessment included the use of ultrasonography, computerized axial tomography, and Magnetic resonance imaging (MRI)*

Results: *There were 12 female and 34 male patients. Their ages ranged from one year to 63 years (mean age 37 years). There was abdominal distention resulting from the accumulation of chyle in the peritoneal cavity in all five subgroups of patients,. A definitive diagnosis was made by paracentesis and laparotomy. Thirty-eight patients (82.6%) underwent explorative laparotomy. The surgical success rate for trauma patients was about 93.7%, while it was very poor for malignant cases. The surgical technique in this study with the best results was overswing with omental patch*

Conclusion: *The results indicate that patients with chylous ascites caused by trauma to the abdomen who undergo surgery may have a success rate up to about 93.7% using omental patches, especially if preoperative resuscitation is done. The outcome of patients with malignant chylous ascites, however, was very poor. Conservative treatment was not satisfactory in any of these cases.*

ملخص البحث

هدف الدراسة: تحديد العوامل المسببة لتجمع الحبن الكيلوسي داخل جوف البطن وتدبيره حسب الحالة المسببة، والمقارنة بين المعالجة المحافظة والمعالجة الجراحية.

طريقة الدراسة: أجريت دراسة مستقبلية في قسم الجراحة في مستشفى اربيل الجامعي، بين عامي 1990 و2004. ضمت الدراسة المرضى المصابين بحبن كيلوسي؛ حيث قسم المرضى إلى خمس مجموعات حسب الحالة المسببة للمرض. شمل التقييم الأولي العمر والجنس ووجود قصة رض أو جراحة سابقة، والزمن بين الرض إن وجد وظهور الحبن الكيلوسي، ورشف سائل الحبن وإجراء التحليل الكيماوي والجرثومي. شمل التقييم أيضاً استخدام الدراسة بالأمواج فوق الصوتية والتصوير الطبقي المحوري المحوسب والمرنان.

النتائج: كان بين المرضى 12 أنثى و34 ذكراً، تراوحت أعمارهم بين 1–63 عاماً (وسطي 37 عاماً). في كافة المجموعات الخمس وجد توسع شديد في جوف البطن نتيجة تجمع السائل الكيلوسي. اعتمد التشخيص النهائي على سحب السائل من البطن وتحليله وكذلك على التداخل الجراحي إن وجد. أجري فتح بطن استقصائي لدى 38 مريضاً (82.6%). كانت نسبة نجاح الجراحة عند المرضى المصابين برض 93.7% بعد التداخل الجراحي باستخدام لصاقات من الثرب، بينما كانت النتائج غير جيدة في حالات الخباثات.

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الخلاصة: تبين هذه النتائج أن التدبير الجراحي باستخدام لصاقات من الثرب عند المرضى المصابين بالحبن الكيلوسي المسبب برض البطن ذو نسبة نجاح عالية تصل إلى 93.7% خاصة عند إجراء الانعاش قبل الجراحة، في حين كانت النتائج سيئة في حالات الحبن المسبب بالخباثات، بينما لم تكن المعالجة المحافظة مرضية في أي من الحالات.

INTRODUCTION

Chylous ascites is a rare, challenging clinical condition that occurs as a result of disruption of the abdominal lymphatics causing extravasation of chyle into the abdominal cavity.[1,2] A variety of conditions affecting the lymphatic structures is responsible for the production of chylous ascites. Malignant tumors in the retroperitoneal space and congenital obstruction of the lymphatic vessels in the abdominal cavity were responsible for most cases in the past, but, more recently, abdominal trauma has appeared to be a major factor in the etiology of this problem.[3,4] Trauma to the lymphatic vessels may lead to continuous leakage of the chyle in to the peritoneal cavity.[5]

Specific infections such as tuberculosis were commonly associated with the development of chylous ascites in the past. Clinically, the presence of abdominal distension resulting from the accumulation of chyle in the peritoneal cavity is strongly suggestive of this disease.[6,7,8]

The prognosis of the ascites is related to that of the disease causing the chylous effusion. Medical therapy of an infectious process or treatment for a malignant disease will lead to cessation of the extravasation of chyle.[9] The presence of a malignant conditions usually carries a serious prognosis. In congenital obstruction, lymphography offers great help in localizing the point of extravasation. Treatment, which consists of suture ligation at the point of leakage, is greatly facilitated by this localization.[10,11]

METHODS

Forty-six patients with a diagnosis of chylous ascites were admitted to the Surgical Department at Erbil Teaching Hospital from 1990 to 2004. All were fully investigated with complete blood profile, biochemical estimations including total serum protein, and analysis of the aspirated fluid from the abdomen to confirm the diagnosis. Other investigations such as ultrasonography (US) and computed tomography (CT) scanning of the abdomen were useful in identifying pathologic intra-abdominal lymph nodes and masses.

They also helped in determining the extent and localization of fluid, particularly if there was a suspicion of a thoracic duct injury. Other studies, such as lymphangiography and lymphoscintigraphy, assisted in detecting abnormal retroperitoneal nodes, leakage from dilated lymphatics, fistulization, and patency of the thoracic duct. Lymphangiography was the gold standard in defining cases of obstruction, but had several complications, such as tissue necrosis, fat embolism, and hypersensitivity, related to the volume and type of contrast used. Magnetic resonance imaging (MRI) was performed for all patients.

RESULTS

There were 12 females and 34 males, with an age range from one to 63 years. Common presenting complaints included weight gain, shortness of breath, nonspecific abdominal pain, and dyspnea resulting from increased abdominal pressure. Computed tomography of the abdomen was done for all patients. The accuracy of CT scanning in this study was 87.5%. Other studies, such as lymphangiography and lymphoscintigraphy, were done in only 25 patients in this study because of limited facilities, and because of known associated complications. The accuracy of lymphangiography in this study was 91%. The 46 patients were divided in the five subgroups according to the cause of chylous ascites as shown in Table 1.

Etiology	No. of patients	%
Trauma	32	69.5
Malignancy	8	17.3
Tuberculosis	3	6.5
Iatrogenic (post operative)	2	4.3
Congenital	1	2.1

Table 1. Causes of chylous ascites in 46 patients.

There were thirty-two patients with a history of blunt and penetrating abdominal trauma, mainly road traffic accidents. The interval between injury and the appearance of ascites ranged from two to six months, depending on the nature of the trauma and the lymphatic channels involved. Some patients who had a history of trauma or who had undergone abdominal or thoracic surgery presented with an acute onset of chylous ascites (Figure 1).[5,8] Eight patients were diagnosed with intra abdominal, pancreatic, gastrointestinal, and retroperitoneal tumors. Four patients were diagnosed with tuberculosis. Two of them had positive examination of ascites for AFB, and the other two were proved by biopsy. Two patients developed chylous ascites following surgery, one for excision of Meckel's diverticulum and the second for excision of a large retroperitoneal lipoma. One patient was diagnosed with congenital ascites after exclusion of all possible causes including trauma during and after labor.

Clinical signs	No. of patients	%
Abdominal distention	45	97.8
Peripheral edema	35	76.0
Serum protein less than 3 gm/dl	18	39.1
Lymphocytes less than 20%	13	28.2
Abdominal mass	5	10.8
Generalized lymphadenopathy	4	8.7
Hemoglobin <8 gm/dl	10	21.7
Elevated ESR > 50 mm/h	12	26.0

Table 2. Clinical signs present in 46 patients with chylous ascites.

Ascitic fluid analysis showed the same composition and characteristics as lymphatic fluid and chyle.[15-17] Its appearance was opaque and milky (Figure 2). The triglyceride level in the ascitic fluid was critical in defining chylous ascites. The values are typically >200mg/dl.[15] Lymphocytes averaged 70% of the total white count.

Of 46 patients with the diagnosis of chylous ascites, 38 (82.6%) underwent surgical procedures, 10 through laparoscopic procedures, and 28 using explorative laparotomy as shown in Table 3. The surgical success rate for trauma patients was about 93.7%, while it was very poor for malignant cases.

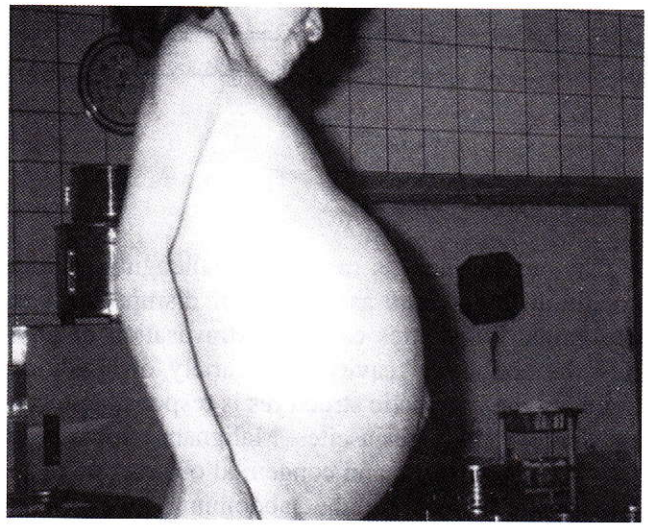

Figure 1. Huge Abdominal distension 6 months after Blunt Abdominal trauma Treated Conservatively.

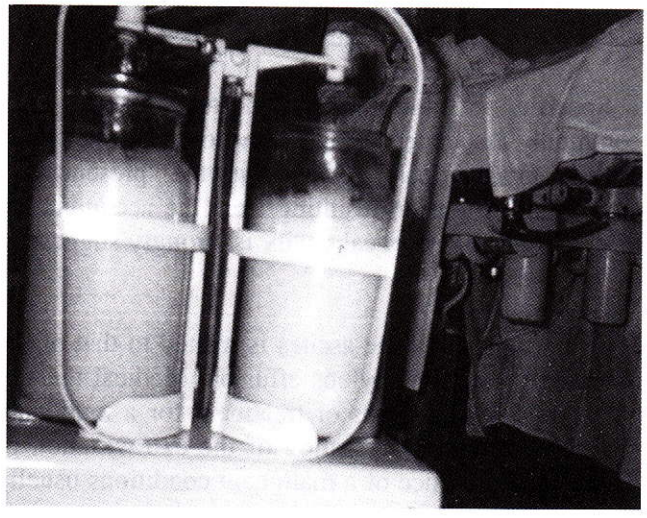

Figure 2. 12000 cc of milk odorless fluid evacuated from the peritoneal cavity.

DISCUSSION

Chylous ascites is a rare and challenging clinical condition that occurs as a result of disruption of the abdominal lymphatics. We include our prospective study and a review of the literature describing the etiology, diagnosis, and therapy of chylous ascites concentrating mainly on the cases resulted from trauma.[1,2,3] Chylous ascites is a rare form of ascites, in which intra-abdominal malignancy, liver cirrhosis, and trauma cause the majority of cases. Abdominal trauma is the main cause of chylous ascites in contrast to the

Etiology	No. of patients	Type of operation
Abdominal trauma	28	Overswing of leaking lymphatic vessels and omental patch.
Abdominal trauma	2	Ligation of leaking lymphatic vessels alone
Abdominal trauma	2	Resection of the small bowel; tear was near the root of the mesentery
Malignancy	2	Presented with intestinal obstruction, bypass procedure
Tuberculosis	1	Presented with intestinal obstruction, resection anastomosis
Congenital	1	Ligation of the leaking site of distally blocked lymphatic vessel
Iatrogenic	2	Overswing of the leaking vessel with the omental patch.
Total	38	

Table 3. Operative procedure in 38 patients with chylous ascites

past when malignancy and infections were more often the basis. Young and middle-aged men are the most common victims at present whereas elderly women were more often seen in the past. In the absence of a malignant or congenital underlying pathology, the prognosis in cases of traumatic and postoperative chylous ascites is good with surgery. Surgery employs swinging an omental patch over the site of the leak or fistula. Normal chyle flow ranges between 1.5 to 2.5 liters per day, depending on the diet and its fat content. Leakage of lymphatic fluid (chyle) into the peritoneal cavity produces a characteristic milky effusion called chylous ascites. Most patients were adults.[16,17]

The most common cause, at the present time, is penetrating and blunt abdominal trauma associated with injury to the lymphatic vessels. Non-traumatic chylous ascites is less common. Most patients are adult; many are elderly men with carcinoma of the pancreas and gastrointestinal tract.[18,19]

Because Chyle contains fat, the diagnosis can be suggested by gross inspection of the ascitic fluid. In addition, a dye given by mouth with 100 grams of butter which changes the color of chyle to green may be demonstrated in the ascitic fluid by tapping the abdomen 12-24 hours later. This test was done in only seven cases because there were safer and more accurate examinations available.[7,10] Lymphocyte count and measurement of triglyceride levels also can help with the diagnosis.[23,24] Lymphangiography can define the site of the leak when it is not clinically obvious.

Chylous ascites is frequently massive and symptomatic. Significant volume losses can occur when paracentesis is performed.[3,5,6]

Dehydration, nutritional losses, and a steady decline in circulating lymphocytes can produce significant disability and an increased susceptibility to infection. Paracentesis and triglyceride level are the most important diagnostic factors. Various management modalities may be used successfully to treat chylous ascites. One of the first measures to be implemented is a low-fat diet with medium-chain triglycerides (MCT) supplementation. Total parenteral nutrition should be reserved for cases when an oral diet fails.

Paracentesis is indicated to improve patient comfort, reduce intra-abdominal pressure, and improve renal function. Treatment should be individualized and adjusted to the severity of lymphatic leakage and its consequences.[6,8]

Decades ago, it was suggested that the treatment of chylous ascites was largely supportive rather than operative. Symptomatic treatment includes correction of fluid and electrolytes, total parenteral nutrition, and replacement of dietary fat with medium chain triglycerides, which are not absorbed by the lymphatics but by the portal vein. Fluid can be removed intermittently by paracentesis.[3,6] Such symptomatic treatment was unsuccessful in our cases and in reports from other centers.[5]

A commonly accepted criterion is that drainage exceeding 500 ml/day in an adult and more than 100 ml/day/year of age in a child is an indication for abandonment of conservative therapy.[17,20]

Treatment failures are most common in non-traumatic chylous ascites.

When conservative treatment fails, the operative approach is indicated by the cause and location of the leak, for iatrogenic injury near the root of small bowel mesentery around the superior mesenteric vessels, the site is identified and the injury controlled with

plication or direct suture and omental patch applied over the area.[9,10]

Surgery in traumatic chylous ascites has a more favorable prognosis. The success rate was 93.7% in this study.

In adults, the most hopeful situation is if an underlying cancer (which is rarely amenable for anatomic resection) producing the chylous ascites regresses with chemotherapy or irradiation. Other surgical endeavors such as a bowel resection, retroperitoneal dissections and a leveen shunt are uniformly futile.[6,7]

This should be considered only when other treatment options are not possible or appropriate because they are potentially associated with risks of obstruction or infection.

Chylous ascites is not an uncommon complication of abdominal trauma and intra abdominal cancers in Erbil province.[16,17,19] Of 46 patients with the diagnosis of chylous ascites, 38(82.6%) patients underwent surgery. There were 28 explorative laparotomies, and 10 patients underwent laparoscopic procedures. The success rate of operation by performing overswing and omental patch for traumatic cases was 97%. In 32 operations for traumatic cases, we had only 2 failure rates. The prognosis is very poor for malignant chylous ascites. In our study, 8 patients with malignant ascites were all dead within one year of the diagnosis.

The follow up for 3.5 years of patients who underwent surgery showed that 70% had acceptable results.

CONCLUSION

There was a success rate of 93.7% in patients undergoing surgery in this study. Patients who have a history of trauma or who have undergone abdominal or thoracic surgery may present with an acute onset of chylous ascites. The most suitable patients for surgery are those with a history of trauma.

Acknowledgment

We would like to thank all of the surgeons at the Erbil Teaching Hospital at the College of Medicine at the University of Salahaddin, Erbil Governorate, Iraq for their kind help and encouragement with the completion of this manuscript, the staff of the Biochemistry Department for their help in biochemical sample analysis, and the members of the Microbiology Department for their bacteriological study of the samples.

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Original Article

موضوع أصيل

PREVALENCE OF MALARIA AND TYPES OF *PLASMODIUM* IN PATIENTS PRESENTING WITH FEVER TO THE HEALTH CENTER IN HAJER VALLEY, HADROMOUT, YEMEN

انتشار الملاريا ونوعها بين المرضى الذين يعانون من الحمى ويترددون على مركز حجر الصحي في محافظة حضرموت ـ اليمن

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ABSTRACT

Objective: *To determine the prevalence of malaria and the species of* Plasmodium *causing the disease in patients presenting with fever to the health center in Hajer Valley, Hadramout, Yemen.*

Methods: *A record-based descriptive study was done in the health center in Hajer Valley, Hadramout Governorate during a one year period from January 2000 to December 2000. The 3653 patients presenting with fever were investigated in the laboratory unit for malaria using thick and thin blood films Additionally, information about age and gender were collected.*

Results: *Age range of the patients was from 0-65. There were 3653 febrile cases (males1886, females 1767) submitted for malaria examinations. Of these, 1212 (33.2%) were malaria parasite positive, 691 (57%) of them were males and 521 (43%) were females. Infants constituted 8%, those 1-4 years 27% and those 5-14 years 27%.* Plasmodium falciparum *represented 97% of the positive malaria cases and* Plasmodium vivax *3%.*

Conclusions: *Hajer Valley is a high-risk area for malaria transmission, and the predominant species was* Plasmodium falciparum. *The majority of the patients were males. Malaria infected all ages, but it was more common in the age groups from 0-14 years. We strongly recommend all febrile cases, in this area, to be treated with antimalarial drugs More efforts are needed to control for this problem in Hajer Valley in order to reduce the rate of infection with malaria parasites.*

ملخص البحث

هدف البحث: تحديد معدل انتشار الملاريا ونوع المتصورات المسببة بين المرضى الذين يعانون من الحمى ويترددون على مركز وادي حجر الصحي في محافظه حضرموت – اليمن.

طرق الدراسة: تمت مراجعة السجلات في المركز الصحي في وادي حجر محافظة حضرموت خلال سنة 2000 وكان مجموع المرضى المصابين بالحمى 3653 والذين أجري لهم فحص الملاريا (بإجراء لطاخات دموية سميكة ورقيقة) وجمعت معلومات حول العمر والجنس.

النتائج: تراوحت أعمار المرضى من 0–65 سنة. بلغت نسبة الإصابة بالملاريا بين المصابين بالحمى حوالي الثلث (1212). توزعت الإصابة بين 691 ذكراً (57%) و521 أنثى (43%). كانت النسبة بين الأطفال الرضع 8% و27% للأعمار 1-4 سنوات و 27% للأعمار 5–14 سنة. الغالبية العظمى من الإصابة كان من نوع المتصورات المنجلية (Plasmodium falciparum) 97%. بينما كانت الإصابة من نوع المتصورات النشيطة (Plasmodium vivax) لا تتجاوز 3%.

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الخلاصة: منطقة وادي حجر عالية الخطر لانتقال الملاريا وأكثر أنواع الطفيليات انتشاراً هو المتصورات المنجلية، حيث تزيد الإصابة بين الذكور عنها لدى الإناث. تصيب الملاريا كافة الأعمار وتزيد لدى الذين تقل أعمارهم عن 15 سنة. وادي حجر يحتاج إلى جهود كبيرة لحل هذه المشكلة. ينصح بمعالجة جميع حالات الحمى- في هذه المنطقة - بالأدوية المضادة للملاريا.

INTRODUCTION

It is reported that 45% of the inhabitants of the Eastern Mediterranean area live under the risk of malaria. The estimated annual figure of malaria cases is about 14 million, of which 95% occurs in four countries: Afghanistan, Somalia, Sudan and Yemen.[1]

Malaria is a complex condition that is manifested in different ways in different parts of the world, depending on a series of variables. These include the infecting parasite and its vulnerability to antimalarial drugs, the circulation and effectiveness of insect vectors, climatic and environmental circumstances, genetic composition, acquired immunity, and activities of the human population.[2,3] Some villages, families or individuals are more at risk than others.[4,5] Housing conditions play an essential role in contracting the infection.[6] The peak incidence rate of disease is in the youngest age groups. This can be attributed to the age-incidence of acquired clinical immunity.[7] Malaria is more prevalent in underdeveloped countries.[8] Under-nutrition is considered as a cause of malaria morbidity and mortality in children less than five years old.[9]

Malaria is the major public health problem in the Republic of Yemen,[10] Sixty percent of the total population live in malarious areas[11] which have the typical Afrotropical pattern in which the principal species is *Plasmodium falciparum*.[12-15] A previous study found that the prevalence of *P. falciparum* infection among Yemeni returnees in Al-Hodeidah governorate was 13.9%, with some seasonal variations.[13] In Taiz Governorate, the prevalence of *P. falciparum* was 18.6%.[11]

A study in Saudi Arabia carried out on Muslim pilgrims found that malaria was prevalent in many Muslim countries and that the frequency of falciparum species seems to be increasing as compared to vivax species.[16] Another study in Riyadh reported that most positive slides were from Saudis (36.6%), Sudanese (30.9%), Indians (13.9%), Pakistanis (8%) and Yemenis (5%). The type of malaria infection varied among the different nationalities, reflecting the pattern of endemicity at the source of infection.[17]

In Khartoum, Sudan, the prevalence of malaria among children presenting with fever to two pediatric hospitals was 35.9%.[18]

The aim of this study was to determine the prevalence of malaria and the species of *Plasmodium* causing the disease among patients presenting with fever to the health center in Hajer Valley, Hadramout Governorate. In addition, the goal was to provide information useful to managers of the malaria control program in Hajer Valley.

METHODS

This is a descriptive record-based study that was conducted in a health center in order to asses the magnitude of malaria in people in the Hajer Valley in Hadramout Governorate, during the one year period from January 1, 2000 to December 31, 2000.

The total population of the Hajer valley was about 38000 in the year 2000. The socioeconomic conditions were very poor. There was an illiteracy rate of 60%, particularly in females (90%)[19] and a weak infrastructure with no asphalt roads or communications. The main water supplies, mainly from Wadi water and Villages wells, were clearly far from the Wadi area. The main economic activity of the population is agriculture. Other widespread diseases in the Hajer Valley were anemia, diarrhea, and malnutrition.[20]

There were 3653 febrile cases that were investigated for malaria in the health center, which was offering medical services for all of the population there. Thick and thin blood films were fixed with absolute methanol, stained with Giemsa (3%), and examined under oil immersion lense for each case.

A high malaria risk area is defined as one where more than 5% of cases of febrile disease in children aged 2-59 months have parasitemia on microscopic examination. A low malaria risk area is defined as one where 5% or less of cases of febrile disease in children aged 2-59 months demonstrate parasitemia.[21] In addition, data about age and sex were collected and analyzed manually.

RESULTS

The range of age of the patients was from 0-65 years. The total number of patients presenting with fever to the health center was 3653; 1212 (33.2%) were malaria parasite positive. There were 691(57%) males, and 521(43%) females (Table 1). Infants made up 8% of the cases, 1-4 years 27%, and 5-14 years 27% (Table 2). The most frequent form of the positive febrile cases was *Plasmodium falciparum* (97%), while *Plasmodium vivax* made up the remaining 3%.

	Malaria positive		Malaria negative	
	No	%	No	%
Males	691	57	1195	49
Females	521	43	1246	51
Total	1212	100	2441	100

Table 1. Distribution of Malaria positive and Negative subjects by sex in Hajer Valley survey 2000.

	Malaria parasite positive	
	No	Percent
Infant	97	8
1-4 years	327	27
5-9 years	170	14
10-14 years	158	13
15-24 years	133	11
25-34 years	109	9
35-44 years	109	9
45 -65	109	9
Total	1212	100

Table 2. Distribution of 1212 case of malaria by age in Hajer Valley 2000.

DISCUSSION

In this study, about one third of the febrile patients attending the health center were malaria parasite positive. This percentage was very high in comparison with other studies in different parts of Yemen,[13] but it was comparable to a study in Sudan.[18] This may be attributed to a series of variables. These include the proximity of the main villages to the Hajer wadi, activities of the population, and the lack of proper malaria control in this area including vector control, water management, and appropriate urban planning. In addition, other widespread diseases in the Hajer Valley were anemia, diarrhea and malnutrition,[20] and these perhaps contributed to the wide-ranging malaria morbidity in children.[9]

In this study, the infected number of males outnumbered that in females. This can be explained by the activities of the males, which may lead to more exposure to malaria infection. In addition, the traditional clothing of the female in Yemen completely covers her, offering protection from insect bites. This study has also shown that the predominant species was *Plasmodium falciparum.*

This agrees with all previous studies in Yemen and demonstrates the typical Afrotropical pattern of infection.[12-15] It agrees to some extent with studies in Saudi Arabia.[16]

In this study, most of the cases were found in children less than 15 years old. This agrees with other studies,[7,9] which reported that the peak prevalence rate of disease is in the youngest age groups. This can be attributed to the age-incidence of acquired clinical immunity.[7] The older patients might have acquired immunity resulting from repeated malarial infections.

CONCLUSION

The Hajer Valley is a high-risk area for malaria. The predominant species was *Plasmodium falciparum*, and the majority of the patients were males. Malaria infected all ages but was more common in the age group of 0-14 years.We strongly recommend all febrile patients, especially children, to be treated with antimalarial drugs. Other procedures that could impact the disease are currently being considered including vector control, water management, and proper urban planning.

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Original Article

موضوع أصيل

IMMUNOSTAINING METHOD TO EXPLORE CELLULAR IMMUNITY AGAINST *TOXOPLASMA GONDII* IN IRAQI WOMEN WITH A HISTORY OF ABORTION

طريقة التلوين المناعي لتحري الاستجابة المناعية الخلوية تجاه المقوسات الغوندية لدى النساء العراقيات اللواتي لديهن قصة إجهاض

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ABSTRACT

Objective: *To explore cellular immunity against* Toxoplasma gondii *in Iraqi women with a history of abortion using the immunostaining method.*

Methods: *Sixty women who had abortion were selected for this study. The presence of anti-Toxoplasma antibodies in their sera was confirmed via ELISA testing. Heparinized blood and serum were collected. The women were divided into three groups according to the presence or absence of specific anti-Toxoplasma antibodies in their serum. These groups included: women with IgG (18), women with IgM (14) and women with both IgG and IgM (12). The other 16 women had no antibodies against* Toxoplasma. *Twenty-four healthy-looking women had been selected as controls. Those that revealed any antibody titer against* Toxoplasma *were excluded from the study. The isolated peripheral blood leukocytes (PBL) were tested for cell surface markers (CD_3, CD_4, CD_8 and CD_{71}) using monoclonal antibodies against T-cell subsets.*

Results: *All the surface markers revealed significantly higher percentages when compared to the healthy controls.*

Conclusion: *The results indicate a strong cellular immune response during toxoplasmosis.*

ملخص البحث

هدف الدراسة: تحري الاستجابة المناعية الخلوية تجاه المقوسات الغوندية عند النساء العراقيات اللواتي لديهن قصة إجهاض باستخدام طريقة التلوين المناعي.

طريقة الدراسة: تم اختيار 60 امرأة تشكين من الإجهاض. وقد أثبت وجود أضداد المقوسات في مصلهن باستخدام اختبار الـ ELISA. جمع الدم الوريدي المضاف إليه الهيبارين، والمصل منهن. وتم تقسيم النساء الى ثلاث مجموعات اعتماداً على وجود أو عدم وجود الأضداد الخاصة بالمقوسات في مصلهن: النساء اللواتي يحملن أضداد IgG (18 امرأة)، والنساء اللواتي يحملن أضداد IgM (14 امرأة)، والنساء اللواتي يحملن كل من IgM وIgG (12 امرأة). ولم تكن لدى 16 امرأة أخرى أضداداً تجاه المقوسات. تم اختيار 24 امرأة صحيحة كمجموعة شاهد، قد تم استبعاد اللواتي يحملن الأضداد منهن من الدراسة. تم فحص الخلايا اللمفاوية المعزولة لتحري واسمات سطح الخلايا CD_3, CD_4, CD_8, CD_{71} باستخدام أضداد أحادية النسيلة.

النتائج: أظهرت جميع هذه الواسمات ارتفاعاً هاماً في نسبها المئوية مقارنةً بمجموعة الشاهد.

الخلاصة: تشير النتائج إلى الاستجابة المناعية الخلوية العالية خلال الإصابة بداء المقوسات.

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INTRODUCTION

Toxoplasmosis, caused by the protozoan parasite *Toxoplasma gondii*, ranks third in the United States for deaths caused by food-born pathogens.[1] Toxoplasmosis can be transmitted across the placenta in women who have the infection acquired either for the first time or recurring (especially in persons who are immunocompromised) during pregnancy.[2] Approximately one in every 1000 pregnant women becomes infected, resulting in anywhere from 400 to 4000 cases of congenital toxoplasmosis each year in the United States.[3] *T. gondii* is an important water or food-born pathogen that is capable of causing severe disease in infants from infected mothers and in immunocompromised patients.[4] It is here that the parasite causes the most severe pathology: disseminated congenital infections in the developing fetus,[5] severe neurological complications in immunocompromised individuals,[6] and ocular pathology in otherwise healthy individuals.[7]

One of the most distinctive immunologic features of *T. gondii* infection is the strong and persistent cell-mediated immunity (CMI) elicited by the parasite, resulting in host protection against rapid tachyzoite growth and consequent pathologic changes. Another interesting aspect of *Toxoplasma*-triggered immunity is that it is normally harmless to the host. Thus, in contrast to many other parasites and several experimental models of toxoplasmosis, *T. gondii,* under normal conditions, fails to elicit significant immunopathologic changes in immunocompetent hosts and is usually accompanied by symptoms no more severe than fever, fatigue, and lymphadenopathy.[8]

METHODS

Subject selection. Sixty women who had spontaneous abortion were selected for this study. They were referred to the Central Health Laboratory in Baghdad along with a physician's report indicating the possibility of toxoplasmosis; the infection was confirmed via ELISA testing to detect anti-*Toxoplasma* specific antibodies. Heparinized blood and serum were collected from the subjects. They were divided into three groups according to the presence or absence of specific anti-*Toxoplasma* antibodies in their serum. These groups included: women with IgG (18), women with IgM (14) and women with both IgG and IgM (12). The other 16 women had no antibodies against *Toxoplasma*. Twenty-four healthy-looking women were selected as controls. Heparinized blood and serum were collected from those women. The serum was tested for anti-*Toxoplasma* antibodies. Those that revealed any antibody titer against *Toxoplasma* were excluded from the study. Any patient or control undergoing therapy or diagnosed with a disease was excluded from the study.

Isolation of peripheral blood lymphocytes. The isolation was carried out according to Boyum.[9]

Indirect immunostaining. Reagents: Monoclonal Antibodies (CD markers) (Dakko), Secondary Antibody which is an anti-mouse peroxidase-conjugated antibody (Dakko), Tris-buffered saline (TBS): Tris base powder was dissolved in DDW at a concentration of 0.5M (60.6 g/L). The pH was adjusted to 7.6 with 1 N HCl. The solution was stored at 4°C, DAB solution (3, 3 Diamino-benzidine tetrahydrochloride) (Sigma). DAB powder was dissolved at a concentration of 0.6 mg/ml of TBS. Immediately before use, hydrogen peroxide (H_2O_2) was added to give a final concentration of 0.01%. Counter stain: Hematoxylin (Sigma). Glycerin (BDH). Chamber slides pre-coated with lymphocytes, were removed from freezer, allowed to reach room temperature, unwrapped and washed with phosphate-buffered saline (PBS). Then, lymphocytes were tested with different CD markers. 10 µl of 1:50 dilution of CD_3, CD_4, and CD8 were left over each spot (each one over each spot) for 90 minutes at 37°C with shaking. Then spots were washed 3 times with PBS, to discard unbound antibodies. After washing, spots were tested with secondary antibody (anti-mouse peroxidase conjugate antibody). 10 µl of 1:100 dilution of this antibody were reacted with spots for 1 hour at 37°C with shaking. Then, cells were washed as previously described.

Ten millilitre of freshly prepared DAB solution, was applied to each spot for about 15-20 minutes or until brown discoloration of the spot appeared. Cells were then washed with PBS and stained with hematoxylin for about 15 seconds. After staining, spots were rinsed with tap water and then PBS was added for 5 minutes. Mounting was then done for the spots using glycerin. Counting of cells was performed using light

microscope (ALTAY) using the high power lens (x 40 magnification). The dark brown staining identified the positively labeled cells, while the negative cells were stained with hematoxylin showing blue color. In each spot, 100 cells were counted with differentiation depending on morphology of cells and labeling. This will give the percent of cells with each CD marker.

Direct immunostaining. The fixed cells on the slides were the solid cellular antigens to which the fluorochrome-labeled monoclonal antibodies are directed. Using the fluorescent microscope, the fluorescently stained cells may be detected, indicating that these specific antigens were detected by those monoclonal antibodies.

Monoclonal fluorescent-labeled antibody CD71: It is the transferrin receptor; it has been expressed on T-lymphocytes, macrophages and monocytes surfaces.[10] The expression of the transferrin receptor protein was examined by Western analysis and found to be specifically elevated in *Toxoplasma*-infected fibroblasts.[11]

Chamber slides, pre-coated with lymphocytes, were removed from freezer, allowed to reach room temperature, unwrapped and washed with PBS. 10 µl of 1:5 dilution of CD71 were applied to duplicate spots, and then incubated within a humid chamber at 37°C in the dark with shaking for two hours. The spots were then washed and 1 to 2 drops of mounting fluid were added onto each well. The cover slips were placed on the mounting fluid- spotted slides. The slides were examined by fluorescent microscope (Olympus) using a 40x magnification lens immediately or up to 3 days later as a maximal duration. A suitable countable field is located and the number of stained cells was counted. Two hundred cells were recovered and counted, and then the calculations were made as follows: Percentage of positively stained cells = (number of labeled cells)/ (total number of cells) x 100

Statistical analysis. The data were statistically analyzed using the Student *T*-test as described in Snedecor and Cochran.[12]

RESULTS

The isolated PBL were tested for cell surface markers using monoclonal antibodies against T-cell subsets.

The percentage of total T cells (CD_3-positive cells) indicates that seropositive women had a significantly higher percentage of T cells [(63.8±7.8 %) ($P \leq 0.05$)] than seronegative ones (50.8±4.2%). There was no significant difference among the groups that had IgG, IgM, or both IgG and IgM in their serum samples [($P > 0.05$) Figure 1]. Regarding T-cell subsets, T-helper or T-inducer and T-cytotoxic or T-suppressor (CD_4 positive cells and CD_8 positive cells respectively), Figure 2 shows that CD_4 -positive cells were significantly higher in percentage in seropositive women (66.5±6.9%) ($P \leq 0.05$) than seronegative ones. There was no significant difference ($P>0.05$) among the groups that had IgG, IgM, or both IgG and IgM. CD_8-positive cells showed a significantly increased number in seropositive women (58.7±4.9%) ($P \leq 0.05$) than seronegative women, while there were no significant differences among the women who had IgG, IgM, or both IgG and IgM (Figure 3).

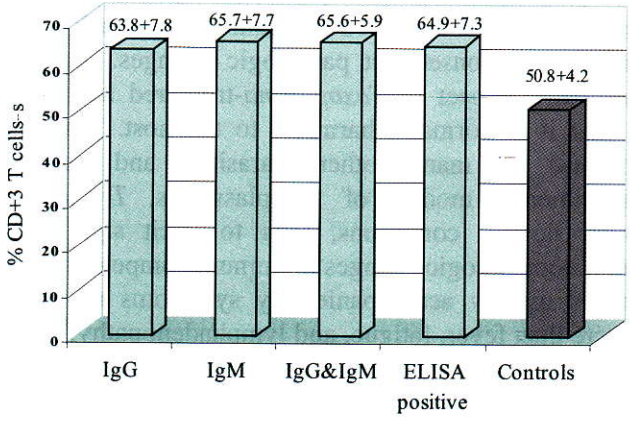

Figure 1. The percentage of CD+3 T cells in the peripheral blood lymphocytes of seropositive women for toxoplasmosis compared with the healthy controls (no antibodies)

Seropositive women showed a significantly higher percentage of CD71+ T cells [(63.3±6.7%) $P \leq 0.05$] than seronegative ones, while there was no significant differences among the women who had IgG, IgM, or both IgG and IgM (Figure 4).

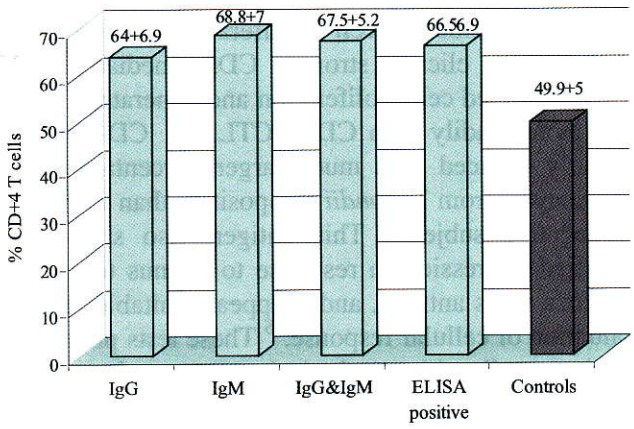

Figure 2. The percentage of CD4+ T cells in the peripheral blood lymphocytes of seropositive women for toxoplasmosis compared with the healthy controls (no antibodies)

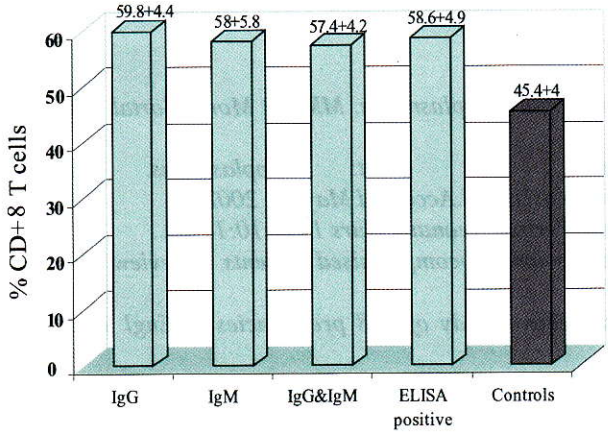

Figure 3. The percentage of CD8+ T cells in the peripheral blood lymphocytes of seropositive women for toxoplasmosis compared wih the healthy controls (no antibodies)

DISCUSSION

There are certain techniques to measure the expressed antigen on activated lymphocytes like the rapid flow cytometric method which is relatively accurate and is a rapid technique.[13] Measurement of expressed specific activation antigens by immunostaining method is another technique although it is not as accurate and rapid as the flow cytometric

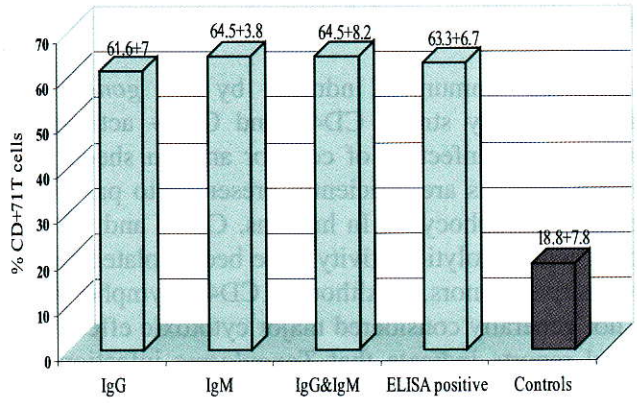

Figure 4. The percentage of CD+71 T cells in the peripheral blood lymphocytes of seropositive women for toxoplasmosis compared with the healthy controls (no antibodies)

method, but in this study it was used for its availability. These activated antigens (CD markers) included CD_3, CD_4, CD_8, and CD_{71}. The results obtained previously indicate that CD_3 is the antigen that is expressed by all mature T cells. CD_4 is presented on T-helper/T-inducer cells (30% to 60% of all peripheral human T lymphocytes), CD_8 expressed by cytotoxic T cells (CTL) as well as suppressor T cells (15% to 40% of all peripheral human T lymphocytes).[14] CD_{71} is expressed on T-lymphocytes, macrophages and monocytes surfaces.[10]

This study showed a significant increase in the CD+3 T cells in women infected with *T. gondii* compared to the healthy controls. This indicates the strong proliferation of the lymphocytes as a result of exposure to the *Toxoplasma* antigen as reported by Kahi *et al.*[13] CD4+ and CD8+ T cell percentages were significantly higher in the women infected with *T. gondii* than in the healthy controls. This may indicate the cytotoxic T lymphocyte (CTL) activity against *T. gondii* as reported by other studies.[15]

Caruso *et al.*[16] considered the CD71 as a specific marker to *T. gondii* expressed on the activated T cells when exposed to *T. gondii* antigen. This study measured the percentage of activated CD71+ T cell in the infected women, and the results showed a

significantly increased percentage of this marker in those women when compared to the healthy controls.

Acquired immunity induced by *T. gondii* is characterized by strong CD4+ and CD8+ activities. Thus, through infection of cells or antigen shedding, parasite peptides are efficiently presented to parasite-specific T lymphocytes. In humans, CD4+ and CD8+ T cells with cytolytic activity have been isolated from seropositive donors.[17] Although CD4+ lymphocytes are not generally considered major cytotoxic effectors, several reports indicate that *Toxoplasma* infection in humans results in generation of CTL of the helper T cell phenotype.[15, 18]

CD8+ T cell immunity plays an important role in protection against intracellular infections[19,20] CD8+ T cells are considered to be the major effector cells responsible for protection against *T. gondii* with CD4+ T cells playing a synergistic role.[21] Both antigen-pulsed and *Toxoplasma* infected antigen presenting cells (APC) induced cell proliferation. *Toxoplasma* infected APC elicited stronger CD4+-mediated than CD8+-mediated cell proliferation and generated CD4+ CTL more readily than CD8+ CTL.[15,22] CD+71 was regularly induced in a much larger percentage of T lymphocytes from *T. gondii* seropositive than *T. gondii* seronegative subjects. This antigen also shows an amplified expression in response to tetanus toxoid or influenza virus antigen, and it appears suitable for the evaluation of cellular response.[16] These tests proved to correlate well with serological status, and samples from seronegative individuals usually showed no stimulation.[13]

CONCLUSION

The results indicate a strong cellular immune response during toxoplasmosis.

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Case Report تقرير حالة طبية

A CASE OF BILIARY FASCIOLIASIS

حالة للمتورقات الكبدية في الطرق الصفراوية

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ABSTRACT

Fasciola hepatica *is known to cause biliary obstruction. We report on a patient with obstructive jaundice and eosinophilia. Endoscopic retrograde cholangiopancreatography (ERCP) was performed which resulted in the extraction of multiple parasites. Fascioliasis must be considered in the differential diagnosis of obstructive jaundice especially if associated with eosinophilia.*

ملخص الحالة

من المعروف أن المتورقة الكبدية تسبب يرقاناً انسدادياً. نعرض هنا حالة مريضة مصابة بيرقان انسدادي مع كثرة الإيوزينيات (الحمضات) في الدم، وقد أجري لديها تصوير طرق صفراوية راجع وتم استئصال عدة طفيليات من القناة الجامعة. إن داء المتورقات الكبدية يجب أن يوضع في التشخيص التفريقي لليرقان الانسدادي خاصة إذا ترافق مع كثرة الإيوزينيات في الدم.

CASE REORT

Fascioliasis is a rare zoonotic disease caused by *Fasciola hepatica*, a liver fluke. In humans, the disease involves mainly the hepatobiliary system. We present a case of fascioliasis and the results of clinical and radiologic features and endoscopic treatment.

A 65-year-old non-smoking, non-alcoholic woman presented with jaundice and abdominal pain. She was from Qameshli (northern Syria) and had no important past medical or surgical history. The jaundice had started two weeks earlier along with right upper quadrant (RUQ) postprandial pain. She also noted dark urine. She denied fever or chills.

Her physical examination was within normal limits except for RUQ tenderness and jaundice.

Laboratory examinations included: red blood cell count 4.7 x 10^{12}/L; hemoglobin 13.2 g/dL; white blood cell count $9.0x10^3/mm^3$ (neutrophils 49%, lymphocytes 19%, eosinophils 26%); erythrocyte sedimentation rate 35 mm/hour; total bilirubin 5.4 mg/dL (direct bilirubin 4.6 mg/dL); alkaline phosphatase: 1750 U/L; alanine aminotransferase (ALT) 60 U/L; total protein 7.4 g/dL; aspartate aminotransferase (AST) 54 U/L; albumin 3.5 g/dL; creatinine 0.8 mg/dL; urea 35 mg/dL; glucose 98 mg/dL.

The abdominal ultrasound showed a dilated common bile duct measuring 13 mm which contained echogenic material in its distal third that did not give a posterior acoustic shadow. The gallbladder had normal wall thickness and contained no stones.

An ERCP was performed and showed irregular substances at the lower end of the common bile duct.

The common bile duct measured 14 mm. The intrahepatic ducts were slightly dilated.

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One centimeter sphincterotomy was performed. A balloon was inserted and nothing was retrieved. When a basket was inserted, green solid material drained. Gross examination revealed the presence of *Fasciola hepatica* larvae.

The patient was treated with 10 mg/kg triclabendazole and discharged in good condition.

DISCUSSION

Fascioliasis is a zoonotic disease caused by the trematode (fluke) *Fasciola hepatica*, which is a relatively large, flat, leaf-shaped, brownish worm measuring 13-30 mm.

Over the period from 1970-1990, 2594 human cases were reported in 42 countries. Most of these cases have been reported from South America, Africa, Australia, the Mediterranean countries, Germany, England and China.[1,2]

Although it is a zoonotic liver fluke that infects a wide variety of mammalian hosts, particularly sheep, goats and cattle, it can also cause disease in human.

Humans become infected after eating aquatic plants (e.g. watercress and sorrel) in which encysted organisms are present or by drinking contaminated water (ingestion of the metacercariae).[2]

After oral ingestion the larvae pass through the intestinal wall into the peritoneum. They find their way through the liver into the bile ducts where they reside as adult worms. In humans, maturation and excretion of the eggs take about 3-4 months.[3] Ectopic migration to other organs may also occur.

The disease mainly involves the hepatobiliary system and is manifested in two stages.

The acute (invasive hepatic) stage develops within two to three months following ingestion and features fever, nausea, hepatomegaly, abdominal pain and eosinophilia. These symptoms are related to the destruction and inflammatory response caused by the migrating larvae. The chronic (biliary) stage features obstructive jaundice, and recurrent cholangitis may occur. It can mimic most of the common hepatobiliary diseases.

The patient's history did not reveal an acute hepatic phase, but a two week history of obstructive jaundice was observed.

Patients are classified according to the duration of their symptoms and the ultrasonographic findings. If the duration of symptoms is greater than 4 months and there are no motile echogenic images in the gallbladder on admission, it is classified as acute.[2]

If symptoms persist for more than 4 months or there are motile echogenic images in the gallbladder, it is classified as chronic. If fascioliasis is defined during investigation for eosinophilia detected in routine screening, or during investigation of a patient's family members, it is classified as latent.[2]

The patient can be classified as an acute case because the history of obstructive jaundice was only two weeks in duration, and no motile echogenic substances were noticed within the biliary tract.

The definitive diagnosis of fascioliasis is based on the presence of *Fasciola* eggs (ova) in the stool. This is unhelpful during the acute phase since the parasites cannot produce eggs before invasion of the biliary tree; however, negative stool examinations do not rule out fascioliasis. A positive serological test (ELISA) may be useful in establishing an early diagnosis. In addition, there are radiological findings that indicate fascioliasis.

Eosinophilia is the most frequent laboratory abnormality in acute cases.[2]

This patient lives in a rural area in the northern part of Syria, where most of the people have direct contact with cattle. His laboratory values revealed marked eosinophilia. This finding led to a suspicion that a helminth was the cause of the obstructive jaundice. This was confirmed by the finding of the larvae (Figure 1).

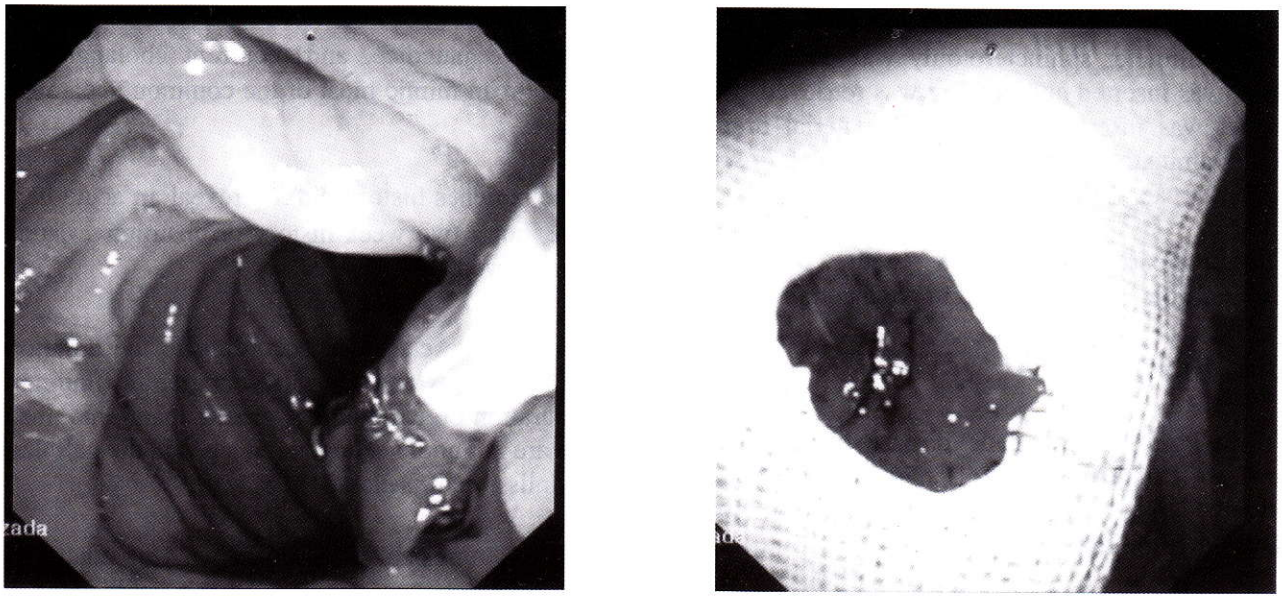

Figure 1. The fluke after extraction from the common bile duct (right). A large view of the fluke *Fasciola hepatica* (left).

Triclabendazole is the drug of choice for treatment.[4] It is highly effective against both mature and immature worms. It is given as a single oral dose of 10 mg/kg, or in cases of severe infection or at an amount of 20 mg/kg divided into two doses.

Fasciola hepatica is basically unresponsive to praziquantel, in contrast to other relevant human-pathogenic trematodes. [5]

Endoscopic retrograde cholangiopancreatography is one therapeutic option in patients with acute obstructive biliary disease as in this case.

CONCLUSION

Fascioliasis is a zoonotic disease that may affect humans, and it should be included in the differential diagnosis of hepatic or biliary conditions with eosinophilia.

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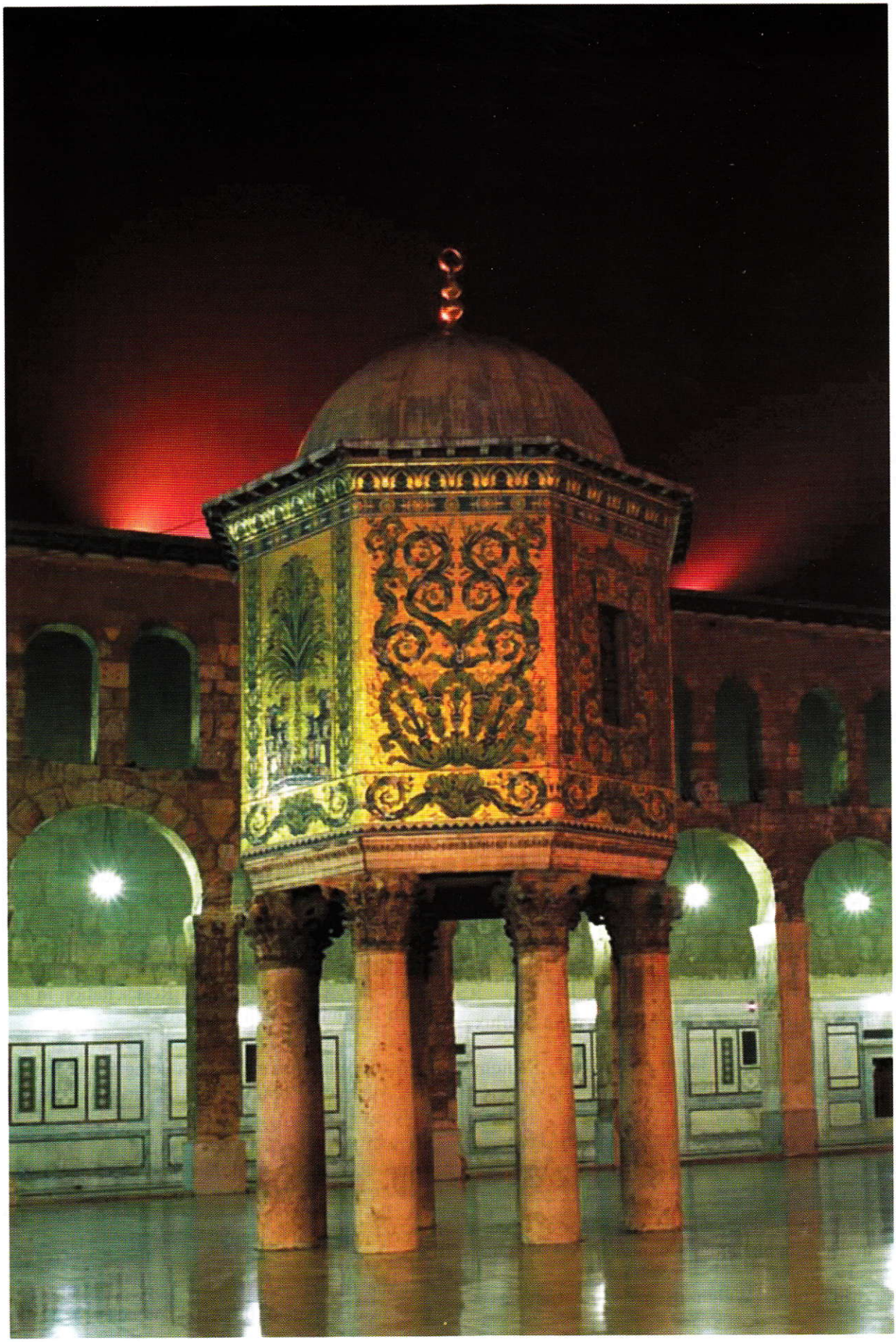

الجامع الأموي - دمشق

Selected Abstracts

Public Health
صحة عامة

How Physicians Feel About Assisting Female Victims of Intimate Partner Violence (IPV)
شعور الأطباء حول مساعدة الإناث ضحايا العنف من الشريك

Ramani NG, et al.
Journal of the Association of American Medical Colleges, Academic Medicine 2002 Dec;77(12, part 1):1262-1265.

Purpose: To assess the feelings of physicians about assisting female victims of intimate-partner violence (IPV), and to examine factors related to positive and negative feelings about assisting victims of IPV.
Method: In 1998, a total site sample of 150 physicians practicing in a large general hospital in the area of Virginia Beach, Virginia, was surveyed by questionnaire via the mail. Four specialties were represented: emergency medicine, family practice, obstetrics-gynecology, and psychiatry. The questionnaire asked about medical training and training in assisting victims of IPV. The physicians' feelings about working with victims of IPV were measured on a nine-item, five-point semantic differential scale.
Results: A total of 76 physicians responded to the questionnaire (response rate = 51%). Only a minority (11%) had overall positive feeling scores about assisting victims of IPV. While most physicians reported that it was "significant work," the great majority also felt that it was difficult, low-paying, and stressful. Training in assisting victims of IPV, in medical school or afterwards, did not appear to influence feelings about assisting victims of IPV. However, physicians who were white and who were married (the majority of the respondents) were significantly more likely than the other respondents to feel negatively about providing services to victims of IPV.
Conclusion: Graduate medical education and training programs need to address the association of negative feelings with helping women harmed by IPV, because these feelings may interfere with the appropriate screening, referral, and treatment of these victims.

هدف البحث: تقييم شعور الأطباء حول مساعدة الإناث ضحايا العنف من الشريك، وتحديد العوامل المتعلقة بالمشاعر السلبية أو الإيجابية حول مساعدة الأطباء لهؤلاء الضحايا.

طريقة الدراسة: تم في عام 1998 إرسال استجواب عبر البريد الالكتروني لـ150 طبيباً يعملون في مشفى عام في منطقة Virginia Beach في ولاية Virginia، تم تمثيل أربعة اختصاصات طبية شملت: طب الطوارئ، طب الأسرة، النسائية والتوليد، والطب النفسي. تم من خلال الاستجواب السؤال عن التدريب المهني للطبيب والتدريب الخاص بمساعدة ضحايا العنف من الشريك IPV. تم تقييم مشاعر الأطباء حول العمل مع ضحايا العنف من الشريك تبعاً لمنظومة نقاط دالة (5 نقاط) مكونة من تسعة بنود.

النتائج: أجاب 76 طبيباً على الأسئلة المعطاة (بمعدل استجابة 51%)، تبين من خلال نتائج الاستجوابات أن قلة فقط من الأطباء (نسبة 11%) لديهم شعور إيجابي حول مساعدة ضحايا العنف من الشريك، بينما عبر معظم الأطباء عن هذا العمل بكونه عمل هام، في حين اعتبرته غالبية الأطباء عملاً صعباً، مجهداً وقليل الأجر. إن التدريب المهني حول مساعدة ضحايا العنف من الشريك – سواء خلال فترة الدراسة الجامعية أو ما بعدها– لم يبدو أن له أثر على شعور الأطباء حول هذه المساعدة، إلا أن الأطباء البيض أو المتزوجين (وهم غالبية الأطباء الذين أجابوا على الاستجواب) كانوا أكثر قابلية للشعور بشكل سلبي حول مساعدة ضحايا العنف من الشريك مقارنة ببقية الأطباء في الدراسة.

الاستنتاجات: يجب التأكيد من خلال هذه الدراسة على ضرورة توجه البرامج الطبية الأكاديمية وبرامج التدريب المهني إلى مشاعر الأطباء السلبية المترافقة مع حالة مساعدة النساء ضحايا العنف من الشريك، ذلك أن هذه المشاعر قد تعوق اتخاذ الإجراءات المناسبة في مثل هذه الحالات من مسح عن الحالة، إحالة المريض، والمعالجة اللازمة.

Systematic Review of Public Education and Policy for Stroke Prevention
مراجعة منهجية للثقافة العامة والتدابير الإجرائية للوقاية من السكتة الدماغية

Wilson DL, et al.
Curr Drug Targets 2007 Jul;8(7):874-9.

Introduction: Stroke is a leading cause of disability and death around the world.

Methods: We conducted a systematic review of peer reviewed articles published since 1999 on the topics of public education and policy for stroke prevention. A research librarian conducted the search using Pubmed and the International Pharmacy Abstracts (IPA). We reviewed the abstracts from the search results to determine if they met the inclusion criteria. Then we abstracted the relevant data from the articles using an evaluation criteria and data abstraction instrument.

Results: The searches of Pubmed and the IPA returned 446 articles, of which 36 were included in the review. Thirty-two were educational programs and four were policies. Twenty-two of the programs were directed at patients, four at providers, and seven at both. Seven of the educational programs were judged successful using the evaluation criteria. They included two large scale programs and five narrowly targeted programs. The policies included two articles presenting guidelines for treatment for stroke prevention in specific patient populations and two articles presenting recommendations for changes in systems of care for stroke prevention and treatment.

Conclusion: Future efforts to evaluate these programs will require global efforts with a special emphasis on testing and validating with international patient populations. Barriers remain for translating stroke prevention policies into clinical practice. "This material is based upon work supported by the North Florida/South Georgia Veterans Health System, the Office of Research and Development, Rehabilitation R&D Service, and Health Services R&D Service, Department of Veteran Affairs."

تمهيد: تعد السكتة الدماغية من الأسباب الرئيسية للإعاقة والوفيات حول العالم.

طرق الدراسة: قمنا بمراجعة شاملة للمقالات المنشورة بدءً من العام 1999 والتي تبحث في موضوع الثقافة العامة والتدابير الإجرائية للوقاية من السكتة الدماغية. وأجرى القائم على مكتبة البحث العلمي بحثاً باستخدام الملخصات البحثية لموقع PubMed وملخصات الصيدلة الدولية (IPA). تمت مراجعة هذه الملخصات المنبثقة عن عملية البحث لتحديد مدى ملاءمتها لمعايير تضمينها في الدراسة، ومن ثم تم تلخيص المعلومات المناسبة باستخدام معايير التقييم وبيانات تلخيص المعلومات.

النتائج: كشفت عمليات البحث عبر PubMed وملخصات الصيدلة الدولية عن 446 مقالة، تم تضمين 36 منها في المراجعة. ومن بين هذه المقالات المضمنة كانت 32 منها برامج تربوية تثقيفية و4 عبارة عن تطبيقات عملية إجرائية. كانت 22 من هذه البرامج موجهة للمرضى، و4 موجهة للقائمين على اتخاذ الوسائل الوقائية Providers، و7 لكليهما. اعتُبرت 7 من البرامج التربوية التثقيفية برامج ناجحة من خلال معايير التقييم، حيث تضمنت برنامجين شاملين وخمسة برامج محددة الأهداف. تضمنت اثنتان من المقالات التطبيقية خطوطاً إرشادية للوقاية ومعالجة السكتة الدماغية عند مجموعة معينة من المرضى، في حين قدمت مقالتان توصيات لإحداث تغييرات في أنظمة العناية الصحية المتعلقة بمعالجة والوقاية من السكتة الدماغية.

الاستنتاجات: إن الجهود المستقبلية في تقييم هذه البرامج تستدعي تضافراً للجهود الدولية، مع التأكيد بشكل خاص على إجراء الاختبارات وتوثيقها على مجموعة من المرضى على المستوى الدولي. تبقى هناك معوقات لترجمة قواعد الوقاية من السكتة الدماغية إلى الممارسة السريرية. تمت هذه الدراسة تحت رعاية مركز صحة المحاربين القدامى في جنوب فلوريدا/ شمال جورجيا، مركز التطوير والبحث العلمي، مركز الخدمات الطبية وإعادة التأهيل، مركز الخدمات الصحية، وقسم شؤون المحاربين القدامى.

Pediatrics
طب أطفال

Outcomes at 2 Years of Age After Repeat Doses of Antenatal Corticosteroids
النتائج الملاحظة بعمر السنتين لاستخدام جرعات متكررة من الستيروئيدات القشرية في الفترة ما قبل الولادة

Crowther CA, et al.
NEJM 2007 Sep 20;357(12):1179-1189.

Background: We previously reported the results of a randomized, controlled trial showing that repeat doses of antenatal corticosteroids reduced the risk of respiratory distress syndrome and serious neonatal morbidity. However, data have not been available regarding longer-term effects of this treatment.

Methods: Women who had received an initial course of corticosteroid treatment 7 or more days previously were randomly assigned to receive an intramuscular injection of corticosteroid (11.4 mg of betamethasone) or saline placebo; the dose was repeated weekly if the mother was still considered to be at risk for preterm delivery and the duration of gestation was less than 32 weeks. We assessed survival free of major neurosensory disability and body size of the children at 2 years of corrected age.

Results: Of the 1085 children who were alive at 2 years of age, 1047 (96.5%) were seen for assessment (521 exposed to repeat-corticosteroid treatment and 526 exposed to placebo). The rate of survival free of major disability was similar in the repeat-corticosteroid and placebo groups (84.4% and 81.0%, respectively; adjusted relative risk, 1.04, 95% confidence interval, 0.98 to 1.10; adjusted P=0.20). There were no significant differences between the groups in body size, blood pressure, use of health services, respiratory morbidity, or child behavior scores, although children exposed to repeat doses of corticosteroids were more likely than those exposed to placebo to warrant assessment for attention problems (P=0.04).

Conclusion: Administration of repeat doses of antenatal corticosteroids reduces neonatal morbidity without changing either survival free of major neurosensory disability or body size at 2 years of age.

خلفية الدراسة: لقد عرضنا سابقاً نتائج دراسة عشوائية مضبوطة أظهرت فائدة إعطاء الستيروئيدات القشرية في الفترة ما قبل الولادة في التقليل من خطر متلازمة الكرب التنفسي وحالات المراضة الهامة عند حديثي الولادة، إلا أنه لا تتوافر معطيات عن التأثيرات بعيدة الأمد لمثل هذه العلاجات.

طريقة الدراسة: تم تنظيم مجموعة من النساء اللواتي أعطين المعالجة البدئية من الستيروئيدات القشرية منذ 7 أيام أو أكثر لإعطائهم جرعة عضلية من الستيروئيدات القشرية (11.4 ملغ من Betamethasone) أو معالجة بالمصل الفيزيولوجي. تمت إعادة الجرعة بشكل أسبوعي عند تزامن وجود خطر لحدوث ولادة باكرة (قبل الأوان) مع كون عمر الحمل أقل من 32 أسبوع. تم تقييم سلامة الطفل من الإعاقات الحسية العصبية الرئيسية وحجم جسمه لدى بلوغه الثانية من العمر المصحح.

النتائج: تمت معاينة وتقييم 1047 من بين 1085 طفلاً كانوا على قيد الحياة بعمر السنتين بنسبة 96.5%، (521 من هؤلاء خضعوا لجرعات متكررة من الستيروئيدات القشرية و526 لمعالجة إرضائية Placebo). إن معدل سلامة الأطفال من الإعاقات الرئيسية كان متشابهاً في كلتا المجموعتين (مجموعة المعالجة بالستيروئيدات ومجموعة المعالجة الإرضائية) حيث قدر بـــ84.4% و81.0% على الترتيب، (الخطر النسبي المعدل 1.04، بفواصل ثقة 95%، 0.98 إلى 1.10، قيمة P المعدلة=0.20). من جهة أخرى لم تلاحظ فروقات بين المجموعتين من حيث حجم الجسم، ضغط الدم، استخدام الوسائل الصحية، معدلات المراضة التنفسية، أو معدل الدرجات في الاختبارات السلوكية للطفل، على الرغم أن الأطفال الذين تعرضوا لجرعات متكررة من الستيروئيدات القشرية كانوا أكثر ميلاً للحاجة إلى تقييم لاضطرابات في الانتباه (P=0.04) مقارنة بالمجموعة الأخرى.

الاستنتاجات: إن إعطاء جرعات متكررة من الستيروئيدات القشرية في الفترة ما قبل الولادة يقلل من المراضة عند حديثي الولادة، إلا أن لا يغير من معدل الإعاقات الحسية العصبية الرئيسية أو حجم الطفل بعمر السنتين.

Long-Term Outcomes After Repeat Doses of Antenatal Corticosteroids
النتائج طويلة الأمد لتطبيق جرعات متكررة من الستيروئيدات القشرية في الفترة قبل الولادة

Wapner RJ, et al.
NEJM 2007 Sep 20;357(12):1190-1198.

Background: Previous trials have shown that repeat courses of antenatal corticosteroids improve some neonatal outcomes in preterm infants but reduce birth weight and increase the risk of intrauterine growth restriction. We report long-term follow-up results of children enrolled in a randomized trial comparing single and repeat courses of antenatal corticosteroids.

Methods: Women at 23 through 31 weeks of gestation who remained pregnant 7 days after an initial course of corticosteroids were randomly assigned to weekly courses of betamethasone, consisting of 12 mg given intramuscularly and repeated once at 24 hours, or an identical-appearing placebo. We studied the children who were born after these treatments when they were between 2 and 3 years of corrected age. Prespecified outcomes included

scores on the Bayley Scales of Infant Development, anthropometric measurements, and the presence of cerebral palsy.

Results: A total of 556 infants were available for follow-up; 486 children (87.4%) underwent physical examination and 465 (83.6%) underwent Bayley testing at a mean (±SD) corrected age of 29.3±4.6 months. There were no significant differences in Bayley results or anthropometric measurements. Six children (2.9% of pregnancies) in the repeat-corticosteroid group had cerebral palsy as compared with one child (0.5% of pregnancies) in the placebo group (relative risk, 5.7; 95% confidence interval, 0.7 to 46.7; P=0.12).

Conclusion: Children who had been exposed to repeat as compared with single courses of antenatal corticosteroids did not differ significantly in physical or neurocognitive measures. Although the difference was not statistically significant, the higher rate of cerebral palsy among children who had been exposed to repeat doses of corticosteroids is of concern and warrants further study.

خلفية الدراسة: أظهرت دراسات سابقة أن تطبيق أشواط متكررة من المعالجة بالستيروئيدات القشرية في الفترة قبل الولادة أدى إلى تحسن في النتائج الملاحظة عند الخدج (المولودين قبل الأوان)، إلا أن هذه العلاجات تؤدي إلى تناقص في وزن الولادة وتزيد من خطورة حدوث نقص النمو داخل الرحم. سنقوم هنا بوصف نتائج المتابعة طويلة الأمد لأطفال ضمن دراسة عشوائية تهدف إلى المقارنة بين استخدام شوط واحد أو عدة أشواط من المعالجة بالستيروئيدات القشرية في الفترة قبل الولادة.

طريقة الدراسة: تم تشكيل مجموعة من الحوامل (بين 23–31 أسبوعاً حملياً) واللواتي استمر حملهن لمدة 7 أيام بعد إعطائهن أول شوط من المعالجة بالستيروئيدات القشرية، وتم إخضاعهن وبشكل عشوائي إلى أشواط أسبوعية من Betamethasone بمقدار 12 ملغ/عضلياً مع تكرار الجرعة لمرة واحدة بعد 24 ساعة، أو إلى معالجة إرضائية (غفل Placebo) مشابهة بالمظهر. تمت دراسة حالة الأطفال المولودين إثر هذه العلاجات لدى بلوغهم 2–3 سنوات من العمر المصحح. تم تقييم النتائج باستخدام مجموع النقاط على سلم Bayley للتطور عند الرضع، والقياسات المجراة على الجسم البشري Anthropometric measurements، ووجود شلل دماغي.

النتائج: توفرت إمكانية لمتابعة عدد كلي من الرضع بلغ 556 رضيعاً، خضع 486 منهم (87.4%) إلى الفحص الفيزيائي، بينما خضع 465 (83.6%) إلى الاختبار تبعاً لمقياس Bayley عند العمر الوسطي المصحح 29.3±4.6 شهراً. لم تلاحظ أية فوارق هامة بين نتائج مقياس Bayley والقياسات المجراة على الجسم البشري. لوحظ شلل دماغي عند ستة أطفال (2.9% من الحمول) في المجموعة الخاضعة لجرعات متكررة من الستيروئيدات القشرية مقارنة بطفل واحد (0.5% من الحمول) في المجموعة المعالجة بالمعالجة الإرضائية (الخطر النسبي 5.7، بفواصل ثقة [CI]=95%، 0.7 إلى 46.7، P=0.12).

الاستنتاجات: لم تلاحظ فروقات هامة بين الأطفال الذين تعرضوا لأشواط متعددة من الستيروئيدات القشرية في الفترة قبل الولادة وبين الذين تعرضوا لشوط وحيد وذلك من خلال مقاييس الفحص الفيزيائي والحالة المعرفية العصبية. ومن جهة أخرى فعلى الرغم أن الفروقات لم تصل للأهمية الإحصائية المطلوبة، إلا أن زيادة معدل الشلل الدماغي عند الأطفال المتعرضين لجرعات متكررة من المعالجة بالستيروئيدات القشرية أمر مثير للاهتمام ويتطلب المزيد من الدراسة.

Obstetrics & Gynecology
التوليد والأمراض النسائية

Human Papillomavirus and Papanicolaou Tests to Screen for Cervical Cancer
اختبارات فيروسات الأورام الحليمية البشرية HPV ولطاخة بابانيكولا (Papanicolaou) للمسح عن سرطان عنق الرحم

Naucler P, et al.
NEJM 2007 Oct 18;16(357):1589-1597

Background: Screening for cervical cancer based on testing for human papillomavirus (HPV) increases the sensitivity of detection of high-grade (grade 2 or 3) cervical intraepithelial neoplasia, but whether this gain represents overdiagnosis or protection against future high-grade cervical epithelial neoplasia or cervical cancer is unknown.

Methods: In a population-based screening program in Sweden, 12,527 women 32 to 38 years of age were randomly assigned at a 1:1 ratio to have an HPV test plus a Papanicolaou (Pap) test (intervention group) or a Pap test alone (control group). Women with a positive HPV test and a normal Pap test result were offered a second HPV test at least 1 year later, and those who were found to be persistently infected with the same high-risk type of HPV were then offered colposcopy with cervical biopsy. A similar number of double-blinded Pap smears and colposcopies with biopsy were performed in randomly selected women in the control group. Comprehensive registry data were used to follow the women for a mean of 4.1 years. The relative rates of grade 2 or 3 cervical intraepithelial neoplasia or cancer detected at enrollment and at subsequent screening examinations were calculated.
Results: At enrollment, the proportion of women in the intervention group who were found to have lesions of grade 2 or 3 cervical intraepithelial neoplasia or cancer was 51% greater (95% confidence interval [CI], 13 to 102) than the proportion of women in the control group who were found to have such lesions. At subsequent screening examinations, the proportion of women in the intervention group who were found to have grade 2 or 3 lesions or cancer was 42% less (95% CI, 4 to 64) and the proportion with grade 3 lesions or cancer was 47% less (95% CI, 2 to 71) than the proportions of control women who were found to have such lesions. Women with persistent HPV infection remained at high risk for grade 2 or 3 lesions or cancer after referral for colposcopy.
Conclusion: The addition of an HPV test to the Pap test to screen women in their mid-30s for cervical cancer reduces the incidence of grade 2 or 3 cervical intraepithelial neoplasia or cancer detected by subsequent screening examinations.

خلفية الدراسة: تساهم عملية المسح عن سرطان عنق الرحم المعتمدة على اختبار فيروسات الأورام الحليمية البشرية HPV في زيادة حساسية كشف الدرجات العالية من تنشؤات عنق الرحم داخل الظهارة (الدرجة 2 أو 3)، إلا أنه من غير المعروف مدى كون هذه الزيادة مجرد زيادة في حالات التشخيص أو أنها تمثل بالفعل حماية مستقبلية ضد الدرجات العالية من تنشؤات عنق الرحم داخل الظهارة وسرطان عنق الرحم.

منهجية الدراسة: في دراسة مسحية سكانية (population-based) أجريت في السويد تمت عملية اختيار عشوائية لـ 2527 امرأة أعمارهن تتراوح بين 32–38 سنة تم تقسيمهن إلى مجموعتين متساويتين. الأولى (مجموعة التدخل) اعتمد لديها اختبار فيروسات الأورام الحليمية البشرية HPV مع اختبار بابانيكولا، والثانية (مجموعة الشاهد) اعتمدت لديها لطاخة بابانيكولا فقط. تمت عند النساء اللواتي لوحظت لديهن لطاخة بابانيكولا طبيعية مع إيجابية اختبار فيروسات الأورام الحليمية البشرية إعادة إجراء اختبار فيروسات الأورام الحليمية البشرية مرة أخرى بعد عام على الأقل من تاريخ الاختبار الأول، مع إجراء تنظير مهبل وخزعة من عنق الرحم في الحالات التي لوحظ فيها خمج مستمر بالنمط العالي الخطورة نفسه من فيروسات الأورام الحليمية البشرية. أما عند مجموعة الشاهد فقد تم إجراء العدد نفسه من لطاخات بابانيكولا وتنظير المهبل وذلك لضمان التعمية المزدوجة. تم استخدام نظام سجلات شامل لمتابعة النساء في مجموعتي الدراسة لمدة وسطية 4.1 سنة. تم حساب المعدلات النسبية لتنشؤات عنق الرحم داخل الظهارة ذات الدرجات 2 أو 3، أو حالات سرطان عنق الرحم التي تم كشفها عند بدء الدراسة وخلال الفحوصات المسحية المجراة لاحقاً.

النتائج: عند بدء الدراسة لوحظ أن نسبة النساء اللواتي لوحظت لديهن آفات تنشؤية داخل الظهارة في عنق الرحم من الدرجة 2 أو 3 في مجموعة التدخل تفوق بمقدار 51% (بفواصل ثقة 95% [CI]، 13 إلى 102) نسبة النساء اللواتي لوحظت لديهن نفس الآفة في مجموعة الشاهد. ومن خلال الاختبارات المسحية المجراة لاحقاً فإن نسبة النساء اللواتي لوحظت لديهن آفات تنشؤية من الدرجة 2 أو 3 أو سرطان في عنق الرحم في مجموعة التدخل كانت أقل من بمقدار 42% (بفواصل ثقة 95% [CI]، 4 إلى 64)، بينما كانت نسبة الآفات من الدرجة 3 أقل بمقدار 47% (بفواصل ثقة 95% [CI]، 2 إلى 71) وذلك بالمقارنة مع نسبة الآفات نفسها الملاحظة في مجموعة الشاهد. كما أن النساء اللواتي يعانين من خمج مستمر بفيروسات الأورام الحليمية البشرية HPV بقين ذوات خطورة عالية للدرجات 2 أو 3 من تنشؤات أو سرطان عنق الرحم لدى إحالتهن لإجراء تنظير مهبل.

الاستنتاجات: إن إضافة اختبار فيروسات الأورام الحليمية البشرية HPV إلى لطاخة بابانيكولا كوسيلة مسحية لسرطان عنق الرحم عند النساء في منتصف الثلاثينات من العمر تقلل من نسبة الدرجات 2 و 3 من تنشؤات عنق الرحم داخل الظهارة وسرطان عنق الرحم المكتشفة خلال الاختبارات المسحية اللاحقة.

Paroxetine and Congenital Malformations: Meta-Analysis and Consideration of Potential Confounding Factors

استخدام الـ Paroxetine والتشوهات الولادية: تحليل النتائج الشامل وأهمية العوامل المؤثرة الكامنة

Bar-Oz B, et al.
PubMed 2007 May 29(5):918-26.

Background: Antidepressants have been commonly used by women of childbearing age. Recent studies suggest that paroxetine, a selective serotonin reuptake inhibitor (SSRI), might specifically increase teratogenic risk.
Objectives: The purpose of this study was to quantify first-trimester exposure to paroxetine and birth defects and examine potential sources of bias in the in utero or postnatal detection of more congenital malformations among women with depression. We also sought to examine whether paroxetine was used for the same indications as other SSRIs among pregnant women.
Methods: This meta-analysis was designed to quantify malformation rates associated with the use of paroxetine. A search of the literature from 1985 to 2006 (English language) found in MEDLINE, EMBASE, REPROTOX, Scopus, and Biological Abstracts was conducted using the following terms: pregnancy outcome, congenital or fetal AND anomalies, malformations, cardiac/heart defects, AND selective serotonin reuptake inhibitors, paroxetine, and Paxil. Administrative databases of medication and medical services use in the Province of Quebec, Canada, were used to calculate the rates of ultrasound and echocardiogram in pregnancy and infancy in women/infants exposed to SSRIs and to compare the indications for general SSRI use versus paroxetine use.
Results: Based on the studies analyzed, first-trimester paroxetine exposure was associated with a significant increase in the risk for cardiac malformation (odds ratio [OR], 1.72; 95% CI, 1.22-2.42). Women using antidepressants in pregnancy had a 30% higher rate of utilization of ultrasound in pregnancy. Infants of women who received SSRIs underwent approximately twice as many echocardiograms in the first year of life compared with children of women who used nothing. Significantly more women receiving paroxetine used the drug for anxiety or panic than women receiving other SSRIs (OR, 4.11; 95% CI, 2.39-7.08).
Conclusion: Based on the results of this meta-analysis, first-trimester exposure to paroxetine appears to be associated with a significant increase in the risk for cardiac malformation. However, a detection bias cannot be ruled out as contributing to the apparent increased detection of cardiovascular malformation of children exposed in utero to paroxetine. A significantly greater number of women were using paroxetine for anxiety or panic when compared with women using other SSRIs.

خلفية الدراسة: تُستخدم مضادات الاكتئاب بشكل واسع لدى النساء بسن الإنجاب. أظهرت الدراسات الحديثة أن دواء Paroxetine –وهو أحد مثبطات عود قبط السيروتونين الانتقائية SSRI– يمكن أن يزيد بشكل واضح من المخاطر المسخية.

هدف الدراسة: تهدف هذه الدراسة إلى تقدير التعرض لـ Paroxetine خلال الثلث الأول من الحمل، العيوب الولادية والمصادر المحتملة للتحيز bias في كشف التشوهات الولادية داخل الرحم أو بعد الولادة عند أطفال النساء المصابات بالاكتئاب. كما سيتم بحث فيما إذا كان Paroxetine يستخدم لنفس الاستطبابات عند الحوامل مقارنة ببقية مثبطات عود قبط السيروتونين الانتقائية SSRIs.

طرق الدراسة: تم من خلال تحليل النتائج الشامل تقدير معدلات التشوهات الولادية المترافقة مع استخدام Paroxetine. تم إجراء بحث في المنشورات الطبية الواردة باللغة الإنكليزية من عام 1985 وحتى عام 2006 المأخوذة من MEDLINE، EMBASE، REPROTOX، Scopus، والملخصات البحثية المرجعية باستخدام المصطلحات التالية: ناتج الحمل، الشذوذات الجنينية أو الولادية، التشوهات، التشوهات القلبية ومثبطات عود امتصاص السيروتونين الانتقائية، أدوية الـ Paroxetine و Paxil. تم استخدام قواعد البيانات الحكومية حول الأدوية والخدمات الطبية في مقاطعة Quebec بكندا لحساب معدلات إجراء تصوير بالأمواج فوق الصوتية (الإيكو) خلال الحمل وتخطيط صدى القلب (إيكو القلب) في فترة الطفولة الأولى لدى الحوامل/الرضع المتعرضين لمثبطات عود قبط السيروتونين الانتقائية SSRI، ومقارنة استطبابات استخدام SSRI العامة مقارنة باستخدام Paroxetine.

النتائج: استناداً إلى تحليل النتائج الشامل، يبدو أن التعرض لـ Paroxetine خلال الثلث الأول من الحمل يترافق مع زيادة واضحة في خطر تطور التشوهات القلبية (نسبة الأرجحية OR=1.72، بفواصل ثقة [CI]=95%، 1.22 إلى 2.42). لوحظ أن النساء اللواتي استخدمن مضادات الاكتئاب خلال الحمل لديهن نسبة أعلى بمقدار 30% في استخدام للأمواج فوق الصوتية (الإيكو) خلال الحمل، كما أن الأطفال

الرضع للنساء اللواتي تلقين معالجة بمثبطات عود قبط السيروتونين الانتقائية قد خضعوا لتخطيط صدى القلب (إيكو قلب) في السنة الأولى من حياتهم بمقدار الضعف بالمقارنة بأطفال النساء اللواتي لم يستخدمن مضادات الاكتئاب. وقد لوحظ أن نسبة أكبر من النساء اللواتي تلقين Paroxetine استخدمن الدواء لدواعي القلق أو الهلع مقارنة باللواتي استخدمن مثبطات عود قبط السيروتونين الانتقائية الأخرى (نسبة الأرجحية OR=4.11، بفواصل ثقة [CI]=95%، 2.39 إلى 7.08).

الاستنتاجات: بالاستناد إلى تحليل الشامل للنتائج، يتضح أن التعرض Paroxetine خلال الأشهر الثلاثة الأولى من الحمل يترافق مع زيادة هامة في مخاطر حدوث التشوهات القلبية، إلا أنه لا يمكن نفي وجود تحيز في الكشف Detection Bias يساهم في الزيادة الملاحظة في كشف التشوهات القلبية الوعائية لدى الأطفال الذين تعرضوا لـ Paroxetine خلال المرحلة الجنينية. ومن جهة أخرى فمن الواضح أن نسبة أكبر من النساء اللواتي تلقين Paroxetine استخدمن الدواء لدواعي القلق أو الهلع مقارنة باللواتي استخدمن أدوية أخرى من مثبطات عود قبط السيروتونين الانتقائية.

Intraplacental Choriocarcinoma: A Rare Complication of Term Pregnancy
السرطانة المشيمية (الكوريوكارسينوما) داخل المشيمة: اختلاط نادر للحمل تام الأوان

Cobanov B, et al.
ANNUAL 2004 Nov 6 th, Department of Pathology and Laboratory Medicine, UMDNJ-RWJMS & UMDNJ-NJMS, NNJ.

Background: Intraplacental choriocarcinoma arising in a full-term placenta is rare. Due to the paucity of available literature, we present a case.
Report of Case: A 24-year-old G2P1 Asian woman was admitted for repeat Cesarean section at 38 weeks gestation. She delivered a healthy infant uneventfully. The 420-gram placenta was grossly unremarkable. A single focus of cytotrophoblastic and syncytiotrophoblastic proliferation around a small cluster of villi was noted histologically. These cells stained focally for human chorionic gonadotropin (HCG), inhibin, and E-cadherin. The proliferation index (Ki-67 staining) approached 100%. The postpartum follow-up (one month) showed no elevation of maternal HCG.
Discussion: Gestational trophoblastic disease ranges from molar pregnancy up to choriocarcinoma. Choriocarcinoma most frequently follows a previous complete hydatidiform mole (50%), though 25% may follow a normal pregnancy or spontaneous abortion. Antecedent full term pregnancy prior to development of choriocarcinoma is a sign of high risk disease. It has been postulated that postpartum choriocarcinoma actually arises in the placenta during the prior pregnancy; however, it is rarely documented histologically, and is usually found only after maternal and/or fetal metastatic disease has been identified.
Primary intraplacental choriocarcinoma is probably more common than reported, but may be overlooked. It is important for pathologists to recognize this histologically subtle lesion, and convey the finding to the clinicians who can appropriately follow up both the mother and the infant.
In summary, this case supports the hypothesis that choriocarcinoma probably arises in the placenta more often than in retained or persistent trophoblast following pregnancy. Hence, more careful gross and microscopic examination of placentas can potentially lead to earlier diagnosis and treatment of this serious clinical condition.

خلفية الدراسة: تعتبر السرطانة المشيمية (الكوريوكارسينوما) داخل المشيمة الناشئة في المشيمة بتمام الحمل من الحالات النادرة التوارد، ونتيجة لقلة المعلومات المتوافرة حول حالات كهذه فإننا نعرض هذه الحالة.

تقرير عن الحالة: مريضة آسيوية عمرها 24 سنة (سوابق حملين وولادة واحدة G2P1) قبلت في المشفى لإجراء قيصرية للمرة الثانية بعمر حمل 38 أسبوع. أنجبت المريضة في النهاية طفل يتمتع بصحة جيدة، لم تظهر المشيمة التي تزن 420 غرام أية تبدلات عيانية ملفتة للنظر، إلا أن الفحص النسيجي أظهر بؤرة وحيدة من الانقسام في الخلايا الأرومة المغذية الخلوية واللاخلوية حول مجموعة من الزغابات المشيمية. تم إجراء تلوينات بؤرية خاصة بالحاثة المنمية المشيمائية البشرية HCG، الإنهيبين Inhibin، وE-cadherin. وصلت قيمة مشعر الانقسام (تلوين Ki-67) إلى 100%. لم تظهر متابعة المريضة خلال شهر من الولادة ارتفاعاً في قيم HCG.

المناقشة: تتراوح آفات الطبقة المغذية الحملية من الحمل الرحوي (الرحى العدارية) وحتى السرطانة المشيمية (الكوريوكارسينوما). تحدث حالات الكوريوكارسينوما بشكل أكثر تواردا إثر رحى عدارية تامة (50%)، إلا أن 25% من الحالات تحدث إثر حمل طبيعي أو إسقاط عفوي. إن وجود حالة حمل تام الأوان بشكل سابق لتطور الكوريوكارسينوما هو علامة لحالة عالية الخطورة من الداء. تم افتراض أن الكوريوكارسينوما الملاحظة خلال فترة النفاس قد تشكلت عملياً في المشيمة خلال الحمل السابق، إلا أنه من النادر توثيق ذلك نسيجياً، حيث

تكتشف الحالة عادة بعد ملاحظة آفات انتقالية لدى الأم أو الجنين. إن حالات الكوريوكارسينوما البدئية داخل المشيمة ربما تكون أكثر شيوعاً مما يتم إيراده حالياً، إلا أنه قد يغفل تشخيصها. إن الأمر الهام هنا هو ضرورة انتباه المشرح المرضي لهذه الآفة الدقيقة الخفية، وإيراد المعلومات عنها للممارس السريري ليقوم بدوره في متابعة الحالة عند الأم والطفل.

الخلاصة: إن هذه الحالة تدعم النظرية التي تقول بإمكانية نشوء السرطانة المشيمية ضمن المشيمة أكثر من نشوئها على الأرومة المشيمية المحتبسة والمستمرة إثر الحمل الطبيعي، ولهذا فإن الفحص العياني والمجهري الدقيق للمشيمة سوف يقود إلى تشخيص هذه الحالة السريرية الخطرة ومعالجتها بشكل أبكر.

Cardiovascular Diseases
الأمراض القلبية الوعائية

Ischemic and Thrombotic Effects of Dilute Diesel-Exhaust Inhalation in Men With Coronary Heart Disease

التأثيرات الخثارية وتأثيرات نقص التروية لاستنشاق دخان الديزل المخفف لدى الرجال المصابين بآفات قلبية إكليلية

Mills NL,et al.
NEJM 2007 Sep 13; 357:1075-1082.

Background: Exposure to air pollution from traffic is associated with adverse cardiovascular events. The mechanisms for this association are unknown. We conducted a controlled exposure to dilute diesel exhaust in patients with stable coronary heart disease to determine the direct effect of air pollution on myocardial, vascular, and fibrinolytic function.

Methods: In a double-blind, randomized, crossover study, 20 men with prior myocardial infarction were exposed, in two separate sessions, to dilute diesel exhaust (300 μg per cubic meter) or filtered air for 1 hour during periods of rest and moderate exercise in a controlled-exposure facility. During the exposure, myocardial ischemia was quantified by ST-segment analysis using continuous 12-lead electrocardiography. Six hours after exposure, vasomotor and fibrinolytic function were assessed by means of intraarterial agonist infusions.

Results: During both exposure sessions, the heart rate increased with exercise (P<0.001); the increase was similar during exposure to diesel exhaust and exposure to filtered air (P=0.67). Exercise-induced ST-segment depression was present in all patients, but there was a greater increase in the ischemic burden during exposure to diesel exhaust (22±4 vs. 8±6 millivolt seconds, P<0.001). Exposure to diesel exhaust did not aggravate preexisting vasomotor dysfunction, but it did reduce the acute release of endothelial tissue plasminogen activator (P=0.009; 35% decrease in the area under the curve).

Conclusion: Brief exposure to dilute diesel exhaust promotes myocardial ischemia and inhibits endogenous fibrinolytic capacity in men with stable coronary heart disease. Our findings point to ischemic and thrombotic mechanisms that may explain in part the observation that exposure to combustion-derived air pollution is associated with adverse cardiovascular events.

خلفية الدراسة: إن التعرض للهواء الملوث نتيجة دخان عوادم السيارات يترافق مع تأثيرات قلبية وعائية ضارة، إلا أن آلية هذا الترافق ما تزال غير معروفة. تم إجراء دراسة تعرض مرضى آفات قلبية إكليلية مستقرة لدخان الديزل المخفف لتحديد التأثير المباشر لتلوث الهواء على الوظيفة العضلية القلبية، الوظيفة الوعائية، والوظيفة الحالة لليفين.

طريقة الدراسة: في دراسة عشوائية، تعابرية crossover، مزدوجة التعمية، تم قبول 20 رجلاً لديهم سوابق احتشاء عضلية قلبية وتم تعريضهم – في جلستين منفصلتين– لدخان الديزل المخفف (بمقدار 300 مكروغرام/المتر المكعب)، أو إلى هواء مرشح (نقي) ولمدة ساعة واحدة وذلك خلال فترات الراحة وفترات الجهد المتوسط الشدة. خلال التعرض تم قياس مدى نقص التروية القلبية من خلال تحليل القطعة ST باستخدام تخطيط القلب الكهربائي المستمر ذو الاتجاهات الإثني عشرة، كما تم تقييم الوظيفة الوعائية الحركية Vasomotor والوظيفة الحالة لليفين بعد 6 ساعات من التعرض من خلال تسريب العوامل الشادة agonists داخل الشريان.

النتائج: خلال جلستي التعرض لوحظت زيادة في معدل النظم القلبي عند الجهد (P<0.001)، كما أن هذه الزيادة كانت متشابهة عند المجموعتين (مجموعة التعرض لدخان الديزل ومجموعة الهواء المرشح) (P=0.67). لوحظ انخفاض القطعة ST المحرض بالجهد عند كل المرضى، إلا أن عبء نقص التروية كان أكبر خلال التعرض لدخان الديزل (−22 ± 4 مقابل −8 ± 6 ميلي فولت ثا، بقيمة P<0.001). إن التعرض لدخان الديزل لم يفاقم من سوء الوظيفة الوعائية الموجود سابقاً، إلا أنه قلل من التحرر الحاد لمفعل البلاسمينوجين النسيجي البطاني المنشأ (P=0.009، تناقص بمقدار 35% في المنطقة تحت المنحني).

الاستنتاجات: إن التعرض قصير الأمد لدخان الديزل المخفف يحرض على حدوث نقص تروية في العضلة القلبية ويثبط القدرة الحالة لليفين داخلية المنشأ عند الرجال الذين يعانون من آفات قلبية إكليلية مستقرة. تشير الموجودات لدينا إلى الآليات الخثارية والاقفارية (نقص التروية) والتي قد تفسر –جزئياً– الترافق بين التعرض للهواء الملوث بنواتج الاحتراق والحوادث القلبية الوعائية.

Use of a Continuous-Flow Device in Patients Awaiting for Heart Transplantation
استخدام وسيلة الجريان المستمر عند المرضى الموضوعين على قائمة الانتظار لزرع القلب

Miller LW, et al.
NEJM 2007 Aug 30;357(9):885-896.

Background: The use of left ventricular assist devices is an accepted therapy for patients with refractory heart failure, but current pulsatile volume-displacement devices have limitations (including large pump size and limited long-term mechanical durability) that have reduced widespread adoption of this technology. Continuous-flow pumps are newer types of left ventricular assist devices developed to overcome some of these limitations.
Methods: In a prospective, multicenter study without a concurrent control group, 133 patients with end-stage heart failure who were on a waiting list for heart transplantation underwent implantation of a continuous-flow pump. The principal outcomes were the proportions of patients who, at 180 days, had undergone transplantation, had cardiac recovery, or had ongoing mechanical support while remaining eligible for transplantation. We also assessed functional status and quality of life.
Results: The principal outcomes occurred in 100 patients (75%). The median duration of support was 126 days (range, 1 to 600). The survival rate during support was 75% at 6 months and 68% at 12 months. At 3 months, therapy was associated with significant improvement in functional status (according to the New York Heart Association class and results of a 6-minute walk test) and in quality of life (according to the Minnesota Living with Heart Failure and Kansas City Cardiomyopathy questionnaires). Major adverse events included postoperative bleeding, stroke, right heart failure, and percutaneous lead infection. Pump thrombosis occurred in two patients.
Conclusion: A continuous-flow left ventricular assist device can provide effective hemodynamic support for a period of at least 6 months in patients awaiting heart transplantation, with improved functional status and quality of life.

خلفية الدراسة: إن استخدام الوسائل المساعدة للبطين الأيسر يعتبر معالجة مقبولة عند مرضى قصور القلب المعند، إلا أن الوسائل النابضة المزيحة للحجم المتوافرة حالياً تعاني من بعض النقاط السلبية التي تحد من استخدامها (تتضمن الحجم الكبير للمضخة، والصلاحية الميكانيكية المحدودة على المدى البعيد)، وهو ما أدى بالنتيجة إلى تراجع الاعتماد على هذه التقنية. تمثل المضخات ذات الجريان المستمر Continuous-flow نمطاً جديداً من الوسائل المساعدة للبطين الأيسر التي تم تطويرها للتغلب على بعض هذه العقبات.

طريقة الدراسة: تم إجراء دراسة مستقبلية متعددة المراكز دون وجود مجموعة شاهد مزامنة، ضمت هذه الدراسة 133 مريضاً في المراحل الأخيرة لقصور القلب موضوعين على قائمة الانتظار لزرع القلب، تم استخدام المضخات ذات الجريان المستمر لدى هؤلاء المرضى. قاعدة النتائج الأساسية المعتمدة شملت نسبة المرضى الذين خضعوا –خلال 180 يوماً– لعملية زرع القلب أو حققوا شفاء قلبي خلال نفس الفترة، أو نسبة المرضى الذين استمر لديهم وجود المضخة ذات الجريان المستمر مع بقائهم مرشحين لإجراء زرع القلب. من جهة أخرى تم تقييم الحالة الوظيفية ونوعية الحياة لدى المريض.

النتائج: تحققت قاعدة النتائج الأساسية لدى 100 مريض (بنسبة 75%). إن المدة الوسطية للدعم القلبي كانت 126 يوم (بمجال من 1 وحتى 600 يوم). معدل البقاء خلال عملية الدعم القلبي كانت 75% بعد 6 أشهر، و68% بعد 12 شهراً. لوحظ بعد 3 أشهر من المعالجة تحسن ملحوظ في الحالة الوظيفية (تبعاً لتصنيف جمعية نيويورك لأمراض القلب ونتائج اختبار السير لمدة 6 دقائق)، وفي نوعية الحياة (تبعاً لاستبيان

Minnesota للحياة بوجود قصور قلب، واستبيان Kansas City لاعتلالات العضلة القلبية). التأثيرات الجانبية الأساسية كانت حدوث نزف بعد الجراحة، سكتة، قصور قلب أيمن، أو إنتان في مكان الدليل المستخدم عبر الجلد، كما حدث خثار على المضخة في حالتين من الحالات.

الخلاصة: يمكن للوسائل المساعدة للبطين الأيسر ذات الجريان المستمر أن توفر دعماً فعالاً من الناحية الحركية الدموية (الهيموديناميكية) لمدة 6 أشهر على الأقل عند المرضى الموضوعين على قائمة الانتظار لزرع القلب، بالإضافة إلى فائدتها في تحسين الحالة الوظيفية ونوعية الحياة لدى هؤلاء المرضى.

Neurology
الأمراض العصبية

Donepezil for the Treatment of Agitation in Alzheimer's Disease
عقار Donepezil لمعالجة الهياج عند مرضى الزهايمر

Howard R, et al.
NEJM 2007 Oct 4, 357(14):1382-1392.

Background: Agitation is a common and distressing symptom in patients with Alzheimer's disease. Cholinesterase inhibitors improve cognitive outcomes in such patients, but the benefits of these drugs for behavioral disturbances are unclear.

Methods: We randomly assigned 272 patients with Alzheimer's disease who had clinically significant agitation and no response to a brief psychosocial treatment program to receive 10 mg of donepezil per day (128 patients) or placebo (131 patients) for 12 weeks. The primary outcome was a change in the score on the Cohen Mansfield Agitation Inventory (CMAI) (on a scale of 29 to 203, with higher scores indicating more agitation) at 12 weeks.

Results: There was no significant difference between the effects of donepezil and those of placebo on the basis of the change in CMAI scores from baseline to 12 weeks (estimated mean difference in change [the value for donepezil minus that for placebo], 0.06; 95% confidence interval [CI], 4.35 to 4.22). Twenty-two of 108 patients (20.4%) in the placebo group and 22 of 113 (19.5%) in the donepezil group had a reduction of 30% or greater in the CMAI score (the value for donepezil minus that for placebo, 0.9 percentage point; 95% CI, 11.4 to 9.6). There were also no significant differences between the placebo and donepezil groups in scores for the Neuropsychiatric Inventory, the Neuropsychiatric Inventory Caregiver Distress Scale, or the Clinician's Global Impression of Change.

Conclusion: In this 12-week trial, donepezil was not more effective than placebo in treating agitation in patients with Alzheimer's disease.

خلفية الدراسة: يعتبر الهياج من الأعراض الشائعة والمربكة عند مرضى الزهايمر. تساعد مثبطات الكولين إستراز في تحسين الحالة المعرفية عند هؤلاء المرضى، إلا أن فائدة هذه الأدوية في الاضطرابات السلوكية ما تزال غير واضحة.

طريقة الدراسة: تمت عملية اختيار عشوائية لـ221 مريض بالزهايمر يعانون من حالة هياج هامة سريرياً دون وجود تحسن باستخدام برامج المعالجة النفسية الاجتماعية، تمت معالجة 113 مريضاً منهم بعقار Donepezil بمقدار 10ملغ يومياً، في حين خضع الباقون وهم 108 مريضاً لمعالجة إرضائية (غفل Placebo) وذلك لمدة 12 أسبوعاً. النتائج الأساسية هي حدوث تغير في مجموع النقاط على مقياس CMAI (Cohen-Mansfield Agitation Inventory) _ وهو سلم من 29 وحتى 203، حيث تعبر زيادة النقاط عن درجة أعلى من الهياج _ وذلك في الأسبوع 12 من العلاج.

النتائج: لم تلاحظ فروقات هامة بين استخدام Donepezil مقارنة بالعلاج الإرضائي وذلك بناءً على التغيرات الملاحظة في مجموع النقاط من بدء العلاج وحتى نهاية الأسبوع 12 على سلم CMAI. (قدر الاختلاف الوسطي في التغير [القيمة في حالة Donepezil ناقص القيمة في حالة العلاج الإرضائي] بـــ-0.06، بفواصل ثقة [CI]=95%، 4.35 إلى 4.22). لوحظ لدى 22 مريضاً في مجموعة المعالجة الإرضائية (نسبة20.4%) و22 مريضاً في المجموعة المعالجة بـــDonepezil (نسبة 19.5%) تراجعاً بمقدار 30% أو أكثر في مجموع النقاط على سلم CMAI (القيمة باستخدام Donepezil ناقص القيمة باستخدام العلاج الإرضائي هي -0.9، بفواصل ثقة [CI]=95%، -11.4 إلى 9.6).

كذلك لم تلاحظ أية فوارق هامة في مجموع النقاط بين المجموعتين السابقتين بالنسبة للقائمة النفسية العصبية، أو مقياس Neuropsychiatric Inventory Caregiver Distress، أو الانطباع السريري الشامل حول التغير الحاصل.

الاستنتاجات: نتبين من خلال هذه الدراسة التي استغرقت 12 أسبوعاً أن استخدام Donepezil لم يظهر فعالية تفوق المعالجة الإرضائية في علاج الهياج عند مرضى الزهايمر.

Early Treatment With Prednisolone or Acyclovir in Bell's Palsy
المعالجة الباكرة لحالات شلل بل باستخدام Prednisolone أو Acyclovir

Sullivan FM, et al.
NEJM 2007 Oct 18;357(16):1598-1607.

Background: Corticosteroids and antiviral agents are widely used to treat the early stages of idiopathic facial paralysis (i.e., Bell's palsy), but their effectiveness is uncertain.

Methods: We conducted a double-blind, placebo-controlled, randomized, factorial trial involving patients with Bell's palsy who were recruited within 72 hours after the onset of symptoms. Patients were randomly assigned to receive 10 days of treatment with prednisolone, acyclovir, both agents, or placebo. The primary outcome was recovery of facial function, as rated on the House Brackmann scale. Secondary outcomes included quality of life, appearance, and pain.

Results: Final outcomes were assessed for 496 of 551 patients who underwent randomization. At 3 months, the proportions of patients who had recovered facial function were 83.0% in the prednisolone group as compared with 63.6% among patients who did not receive prednisolone (P<0.001) and 71.2% in the acyclovir group as compared with 75.7% among patients who did not receive acyclovir (adjusted P=0.50). After 9 months, these proportions were 94.4% for prednisolone and 81.6% for no prednisolone (P<0.001) and 85.4% for acyclovir and 90.8% for no acyclovir (adjusted P=0.10). For patients treated with both drugs, the proportions were 79.7% at 3 months (P<0.001) and 92.7% at 9 months (P<0.001). There were no clinically significant differences between the treatment groups in secondary outcomes. There were no serious adverse events in any group.

Conclusion: In patients with Bell's palsy, early treatment with prednisolone significantly improves the chances of complete recovery at 3 and 9 months. There is no evidence of a benefit of acyclovir given alone or an additional benefit of acyclovir in combination with prednisolone.

خلفية الدراسة: تستخدم الستيروئيدات القشرية ومضادات الفيروسات بشكل واسع في معالجة المراحل الباكرة من الشلل الوجهي مجهول السبب (شلل بل)، إلا أن فعالية هذه العلاجات ما تزال غير مؤكدة.

طريقة الدراسة: تم إجراء دراسة عشوائية، عواملية، مزدوجة التعمية، مضبوطة بمعالجة إرضائية Placebo على مرضى شلل بل تم قبولهم للدراسة خلال 72 ساعة من بدء الأعراض. تم تقسيم المرضى بشكل عشوائي لأربع مجموعات ستعالج لمدة 10 أيام باستخدام Prednisolone أو Acyclovir أو كلاهما، أو بمعالجة إرضائية. تضمنت النتائج الأولية استعادة الوظيفة الوجهية تبعاً لمقياس House-Brackmann، أما النتائج الثانوية فشملت نوعية الحياة، المظهر، والألم.

النتائج: تم تقييم النتائج النهائية عند 496 مريض من أصل 551 مريض ضمن الدراسة. بعد ثلاثة أشهر من بدء الأعراض بلغت نسبة المرضى الذين استعادوا الوظيفة الوجهية 83.0% في المجموعة التي عولجت بـــPrednisolone مقارنة بنسبة 63.3% عند بقية المرضى الذين لم يعالجوا به (P<0.001)، بينما بلغت هذه النسبة 71.2% عند المرضى المعالجين بـــAcyclovir مقارنة بنسبة 75.7% عند المرضى الذين لم يعالجوا به (قيمة P المعدلة=0.50). وبعد 9 أشهر من بدء الأعراض بلغت هذه النسب 94.4% لمجموعة الـــPrednisolone، و81.6% لبقية المرضى غير المعالجين به، و85.4% لمجموعة الـــAcyclovir، و90.8% لبقية المرضى غير المعالجين به (قيمة P المعدلة=0.10). أما المرضى الذين عولجوا بالدواءين معاً فإن نسبة استعادة الوظيفة الوجهية بلغت 79.7% (P<0.001) بعد 3 أشهر، و 92.7% بعد 9 أشهر (P<0.001). لم تلاحظ فروقات هامة بين المجموعات العلاجية بالنسبة للنتائج الثانوية، كما لم تلاحظ أية تأثيرات جانبية هامة في أية مجموعة.

الاستنتاجات: إن المعالجة الباكرة لشلل بـــل باستخدام الـــ Prednisolone تحسن بشكل ملحوظ فرص الشفاء الكامل بعد 3 شهر و9 أشهر من بدء الحالة. من جهة أخرى لم تلاحظ أدلة توجه لوجود فائدة باستخدام الـــAcyclovir بشكل مفرد أو مشاركة مع الـــPrednisolone .

Gastroenterology
أمراض هضمية

Probiotics for Induction of Remission in Ulcerative Colitis
استخدام الطلائع الحيوية Probiotics لتحريض الهجوع في حالات التهاب الكولون القرحي

Mallon P, et al.
PubMed Cochrane Database Syst Rev 2007 Oct 17;(4):CD005573.

Background: Ulcerative Colitis (UC) is an inflammatory condition affecting the colon with an incidence of approximately 10-20 per 100,000 per year. No existing intervention is effective in all patients with a proportion requiring colectomy. There are significant proportion of patients who experience adverse effects with current therapies. Consequently, new alternatives for the treatment of UC are constantly being sought. Probiotics are live microbial feed supplements that may beneficially affect the host by improving intestinal microbial balance, enhancing gut barrier function and improving local immune response.

Objectives: To assess the efficacy of probiotics compared with placebo or standard medical treatment (5-aminosalicylates, sulfasalazine or corticosteroids) for the induction of remission in active ulcerative colitis.

Search Strategy: A comprehensive search for relevant randomised controlled trials (RCT's) was carried out using MEDLINE (1966-January 2006), EMBASE (January 1985- 2006) and CENTRAL. The Cochrane IBD/FBD Review Group Specialised Trials Registrar was also searched. The Australasian Medical Index, Chinese Biomedical Literature Database, Latin American Caribbean Health Sciences Literature (LILACS), and the Japan Information Centre of Science and Technology File on Science, Technology and Medicine (JICST-E) were also used to identify abstracts. Conference proceedings from the Falk Symposium, Digestive Disease Week (DDW) and the United European Digestive Disease week were hand-searched. Authors of relevant studies and drug companies were contacted regarding ongoing or unpublished trials that may be relevant to the review.

Selection Criteria: Randomised controlled trials investigating the effectiveness of probiotics compared to standard treatments in the induction of remission of active ulcerative colitis.

Data Collection And Analysis: Two authors independently assessed trial quality and extracted data for analysis. Data were analysed using RevMan 4.2.7. A formal meta-analysis was not preformed due to differences in probiotics, outcomes and trial methodology.

Main Results: None of the included studies reported any statistically significant differences in remission or clinical improvement rates between probiotic and placebo or active comparator groups.

Conclusion: Conventional therapy combined with a probiotic does not improve overall remission rates in patients with mild to moderate ulcerative colitis. However, there is limited evidence that probiotics added to standard therapy may provide modest benefits in terms of reduction of disease activity in patients with mild to moderately severe ulcerative colitis. Whether probiotics are as effective in patients with severe and more extensive disease and whether they can be used as an alternative to existing therapies is unknown. Further well designed, larger randomised controlled trials are needed to determine whether probiotics can be used as an alternative to current treatment modalities.

خلفية الدراسة: يعتبر التهاب الكولون القرحي UC حالة التهابية تصيب الكولون بمعدل حدوث يقارب 10–20 لكل 100000 نسمة سنوياً. لا يوجد حتى الآن تداخل يحقق فائدة عند كل المرضى، مع وجود نسبة من الحالات تتطور نحو الحاجة لاستئصال كولون، كما توجد نسبة كبيرة من المرضى يعانون من التأثيرات الجانبية للعلاجات المطبقة حالياً، ولهذا يوجد سعي دؤوب للتوصل لأدوية حديثة بديلة لمعالجة هذه الحالة. تمثل الطلائع الحيوية Probiotics عناصر جرثومية طعامية حية يمكن أن تؤثر إيجاباً على الثوي من خلال تحسين التوازن في الجراثيم المعوية وهو ما يعزز وظيفة الأمعاء كحاجز ضد العناصر الممرضة ويحسن الاستجابة المناعية الموضعية.

هدف الدراسة: تقييم فعالية الطلائع الحيوية Probiotics مقارنة بالمعالجة الإرضائية أو العلاجات الطبية التقليدية مثل (5-aminosalicylates, sulfasalazine) أو الستيروئيدات القشرية في الوصول لحالة هجوع في الحالات الفعالة من التهاب الكولون القرحي.

منهجية الدراسة: تم إجراء بحث شامل عن الدراسات العشوائية المضبوطة بشاهد ذات العلاقة بهذا الموضوع من خلال استخدام MEDLINE (من عام 1966 وحتى شهر كانون الثاني من عام 2006)، وEMBASE (من شهر كانون الثاني 1985 وحتى نفس الشهر من عام 2006)، وCENTRAL. كما تم البحث في سجلات الأبحاث التخصصية لمجموعة Cochrane IBD/FBD، الفهرس الطبي الاسترالي، قاعدة بيانات السجلات الطبية الحيوية الصينية، سجلات العلوم الصحية في أمريكا اللاتينية (LILACS)، ومركز المعلومات الياباني للعلوم والتقانة، كما استخدم أيضاً البحث الطبي والتقني (JICST-E) للحصول على المقالات. استخدمت ملخصات المؤتمرات واللقاءات التالية: Falk Symposium، أسبوع الأمراض الهضمية DDW، أسبوع الأمراض الهضمية للاتحاد الأوروبي، كما تم الاتصال بالقائمين على المقالات والدراسات والشركات الدوائية ذات الصلة للإطلاع على الدراسات غير المنشورة أو الموضوعة قيد النشر في هذا الموضوع.

معايير الاختيار: تم اختيار الدراسات العشوائية المضبوطة بشاهد التي تبحث في فعالية الطلائع الحيوية مقارنة بالمعالجات التقليدية في تحريض الهجوع في الحالات الفعالة من التهاب الكولون القرحي.

جمع المعطيات وتحليلها: قام باحثان – وبشكل مستقل– بتقييم نوعية الدراسات واستخلاص المعطيات بهدف تحليلها، تمت عملية تحليل البيانات من خلال استخدام RevMan 4.2.7. لم يتم إجراء تحليل منهجي شامل للنتائج Metaanlysis وذلك لوجود اختلافات في الطلائع الحيوية، طريقة الدراسة والنتائج بين الدراسات.

النتائج الرئيسية: لم تورد أيٌّ من الدراسات المتضمنة فروقات هامة إحصائياً في معدلات الهجوع أو التحسن السريري بين استخدام الطلائع الحيوية والمعالجة الإرضائية أو مجموعات المقارنة الفعالة.

الاستنتاجات: إن مشاركة المعالجة التقليدية مع الطلائع الحيوية لم تحسن معدلات الهجوع في الحالات الخفيفة أو المتوسطة الشدة من التهاب الكولون القرحي، إلا أنه توجد دلائل محدودة على أن إضافة الطلائع الحيوية إلى المعالجة المعيارية قد تعطي فائدة متواضعة على صعيد تقليل فعالية الداء في الحالات الخفيفة والمتوسطة الشدة من المرض. ولكن من غير المعروف مدى وجود فعالية مشابهة للطلائع الحيوية في الحالات الشديدة والمنتشرة من التهاب الكولون القرحي، أو قابلية استخدامها كبديل عن المعالجات المتوافرة حالياً، وهنا لا بد من إجراء المزيد من الدراسات العشوائية الأوسع لتحديد إمكانية استخدام الطلائع الحيوية كبديل عن العلاجات الحالية في مثل هذه الحالات.

The Pathophysiology of Gastro-Esophageal Reflux Disease: Review Article
الفيزيولوجيا المرضية لداء القلس المعدي المريئي: مقالة للمراجعة

Boeckxstaens GE.
PMID 2007 Jul 15;26(2):149-60

Background: Gastro-oesophageal reflux disease (GERD) is a common condition that develops when the reflux of stomach contents causes troublesome symptoms and/or complications. AIM: To review the current knowledge on the underlying factors contributing to GERD, with particular emphasis on the most recent research.
Methods: Literature searches were conducted in Medline and EMBASE. The abstracts from recent large congresses were also reviewed to ensure coverage of the latest findings.
Results: The pathophysiological factors causing GERD can be split into those inducing greater exposure of the oesophagus to stomach contents, and those that provide increased perception of reflux or increased mucosal damage. Transient lower oesophageal sphincter relaxations, which are likely to be triggered by gastric distension, appear to be a key physiological cause of GERD. Excessive reflux may also be provoked by impaired oesophageal or gastric clearance mechanisms. Pre-epithelial, epithelial and post-epithelial defences all normally protect the oesophagus from injury, and may be compromised in individuals with GERD. Heartburn could also be caused by oesophageal hypersensitivity as a result of visceral neural pathway dysfunction.
Conclusion: The pathophysiology of GERD is multifactorial, and abnormalities in the gastro-oesophageal junction, the stomach, the oesophagus and the nervous system may all contribute to this disease state.

خلفية الدراسة: يعتبر داء القلس المعدي المريئي GERD من الحالات الشائعة التي تتطور عندما تعود محتويات المعدة إلى المري مسببةً أعراضاً مزعجة مع تطور لاختلاطات أخرى أحياناً.

هدف الدراسة: مراجعة المعلومات المتوافرة حالياً عن العوامل المسببة لهذا الداء مع التأكيد بشكل خاص على الدراسات الحديثة في هذا المجال.

طريقة الدراسة: تم إجراء بحث ضمن المنشورات الطبية MEDLINE وEMBASE، كما تم الإطلاع على ملخصات الأبحاث واللقاءات العلمية الحديثة لتأكيد الحصول على المكتشفات الجديدة.

النتائج: يمكن تقسيم عوامل الفيزيولوجيا المرضية المسببة للقلس المعدي المريئي GERD إلى عوامل تزيد من تعرض المري لمحتويات المعدة، وعوامل تزيد من حدة القلس والأذية الظهارية الناتجة عنه. إن الارتخاءات العابرة في المصرة المريئية السفلية – والتي تُحرَّض بتوسع المعدة – يبدو أنها المسبب الأساسي لهذا الداء، كما أن ضعف وظيفة التصفية أو التنظيف (clearance) في المعدة والمري يساهم أيضاً في التحريض على القلس. إن آليات الدفاع قبل الظهارية، الظهارية وبعد الظهارية والتي تقوم بحماية المري من الأذية في الحالات الطبيعية ربما تكون مختلة الوظيفة عند مرضى القلس المعدي المريئي GERD. يمكن أن تُعزى الحرقة القلبية Heartburn أيضاً إلى فرط حساسية المري نتيجة لاضطرا بات في الطرق العصبية الحشوية.

الاستنتاجات: إن الفيزيولوجيا المرضية لداء القلس المعدي المريئيGERD متعددة العوامل، حيث تساهم الاضطرابات في الوصل المريئي المعدي، المعدة، المري والجملة العصبية بمجموعها في تطور هذه الحالة المرضية.

Dosing Considerations in the Use of Sodium Phosphate Bowel Preparations for Colonoscopy
الاعتبارات المتعلقة بالجرعة عند استخدام مستحضرات فوسفات الصوديوم المعوية من أجل تنظير الكولون

Rex DK.
Ann Pharmacother 2007 Sep; 41(9):1466-75.

Objective: To review dosing considerations and other treatment recommendations to maximize the efficacy, tolerability, and safety of sodium phosphate (NaP) preparations.
Data Sources: Literature was accessed through PubMed (1990-May 2007) and abstracts from scientific meetings.
Study Selection And Data Extraction: English-language publications including clinical trials and case reports were evaluated. Recent reports assessing newer bowel preparations containing reduced doses of NaP were reviewed to evaluate efficacy, tolerability, and safety.
Data Synthesis: Among commonly administered bowel preparations for colonoscopy, NaP preparations are generally more effective and better tolerated compared with polyethylene glycol electrolyte lavage solution regimens. However, NaP preparations are contraindicated in specific patient populations, and clinicians must use effective screening mechanisms to select proper patients to receive NaP preparation for colonoscopy. Recently, cases of renal failure in patients with previously normal renal function have been reported after NaP preparation for colonoscopy, heightening concerns about the safety of these agents. Newer products contain reduced doses of NaP and may improve the safety and tolerability of NaP purgatives without compromising efficacy of colon cleansing. In addition, accumulating clinical data and/or rationale support split dosing of NaP products, wide intervals between doses, and aggressive hydration before and during bowel preparation and after the colonoscopy procedure.
Conclusion: Safe administration of NaP products requires rigorous attention to dosing considerations and other treatment recommendations, including administration of minimally effective doses of NaP, split-dosing schedules, and aggressive hydration.

خلفية الدراسة: مراجعة الاعتبارات المتعلقة بالجرعة والتوجيهات العلاجية الأخرى بهدف تحقيق الفعالية، التحمل والسلامة العظمى عند استخدام مستحضرات فوسفات الصوديوم NaP.

مصدر البيانات: تم البحث ضمن المنشورات الطبية عبر PubMed (1990 وحتى أيار 2007)، وملخص أعمال اللقاءات العلمية.

اختيار الدراسات واستخلاص المعطيات: تم تقييم المنشورات الطبية باللغة الإنكليزية المتضمنة تجارب أو تقارير طبية، بالإضافة إلى مراجعة السجلات الحديثة التي تدرس مستحضرات معوية جديدة تحتوي كمية أقل من NaP من حيث فعاليتها، قابلية تحملها، وسلامة استخدامها.

تشكيل البيانات: من بين المستحضرات المعوية المتعددة المستخدمة لتنظير الكولون، فإن مستحضرات فوسفات الصوديوم NaP هي الأكثر فعالية والأفضل تحملاً بالمقارنة مع محاليل الرحض الحاوية على شوارد polyethylene glycol. من جهة أخرى يكون استخدام

مستحضرات NaP مضاد استطباب عند بعض المرضى، ولهذا يجب على الطبيب السريري استخدام آليات مسحية فعالة لتحديد المرضى المؤهلين لاستخدام مستحضرات NaP. مؤخراً أوردت حالات قصور كلوي إثر استخدام مستحضرات فوسفات الصوديوم NaP في تنظير الكولون عند مرضى كانت لديهم الوظيفة الكلوية طبيعية قبل التنظير، وهو ما زاد من القلق حول سلامة استخدام هذه المركبات. تحتوي المنتجات الجديدة على كمية أقل من NaP الأمر الذي قد يجعلها أسلم استخداماً وأفضل تحملاً دون أن يؤثر على فعاليتها في تنظيف الكولون. بالإضافة لما سبق توجد معطيات سريرية وأسباب منطقية متراكمة تدعم تقسيم الجرعة في مركبات NaP ، ومراعاة وجود فترات زمنية واسعة بين الجرعات، مع تطبيق إماهة قوية قبل وأثناء تحضير الأمعاء وبعد إجراء عملية التنظير.

الاستنتاجات: إن الإعطاء الآمن لمستحضرات فوسفات الصوديوم NaP يتطلب انتباهاً كبيراً لاعتبارات الجرعة المعطاة والتوجيهات العلاجية الأخرى والتي تتضمن إعطاء الجرعة الفعالة الأدنى من فوسفات الصوديوم NaP مقسمة على دفعات.

Infectious Diseases
أمراض إنتانية

Darunavir: A Nonpeptidic Antiretroviral Protease Inhibitor
عقارDarunavir: مضاد للفيروسات الإرتجاعية من مثبطات البروتياز غير الببتيدية

McCoy C.
PubMed Clin Ther 2007 Aug;29(8):1559-76.

Background: Protease inhibitors were a major therapeutic breakthrough in the mid-1990s for the treatment of HIV infection, which resulted in improved life expectancy for patients who had failed previous therapies. With time and evolution of the virus, however, there is a new population of patients with treatment-resistant disease and few treatment options. Darunavir is a synthetic nonpeptidic analogue of amprenavir with enhanced activity against resistant virus that became available in 2006.

Objectives: The purpose of this review was to describe the clinical pharmacology, pharmacokinetic and pharmacodynamic properties, and clinical efficacy of darunavir. Also discussed are the published clinical experience with darunavir, its adverse events, drug interactions, pharmacoeconomics, and dosing and administration.

Methods: A MEDLINE and EMBASE search (English-language only) was performed from January 1996 through April 2007 using the key words darunavir and TMC114. Abstracts from relevant scientific meetings were searched for the years 2000 through 2007. Additionally, the US Food and Drug Administration Web site was accessed to review the new drug application summary and data presented therein.

Results: Darunavir was found to maintain antiretroviral activity against HIV with protease inhibitor mutations in 6 studies. Clinical efficacy and safety data are limited to 4 controlled and 2 uncontrolled trials. In 2 large Phase IIb clinical studies, viral suppression at 48 weeks to undetectable levels in heavily pretreated patients was achieved in 45% of patients compared with 10% of patients in the control group ($P < 0.001$). The addition of enfuvirtide enhanced this response rate to 58% compared with 11% of the patients who did not receive enfuvirtide ($P < 0.001$). Gastrointestinal symptoms, nausea, and headache were the most commonly reported events.

Conclusion: Darunavir has improved activity against resistant HIV isolates in patients with few treatment choices, particularly when enfuvirtide is added. The safety profile of darunavir is comparable to other protease inhibitors based on early data. Copyright 2007 Excerpta Medica, Inc.

خلفية الدراسة: لقد مثل تطوير مثبطات البروتياز في منتصف التسعينات اختراقاً مهماً في معالجة الإنتان بفيروس عوز المناعة البشري HIV (الإيدز)، وقد أدى ذلك إلى تحسن في متوسط العمر المتوقع لدى المرضى الذين فشلت لديهم المعالجات السابقة. إلا أنه وبمرور الوقت وحدوث تحول في الفيروس، ظهرت مجموعة جديدة من المرضى تتميز بداء معند على العلاج وبخيارات علاجية محدودة. يعتبر الـ Darunavir مشابه صنعي غير ببتيدي لـ Amprenavir يتميز بفعالية أكبر ضد الفيروسات المقاومة وقد أصبح متوافراً للاستخدام بدءاً من عام 2006.

هدف الدراسة: تهدف هذه المراجعة البحثية إلى وصف الخصائص الدوائية السريرية، الحرائك والأفعال الدوائية، والفعالية السريرية لـ Darunavir. كما ستبحث في الخبرات السريرية في استخدام هذا العقار، تأثيراته الجانبية، تداخلاته الدوائية، مزاياه الاقتصادية، وطرق إعطائه والجرعات المعتمدة.

طريقة الدراسة: تم إجراء بحث عبر MEDLINE وEMBASE (باللغة الإنكليزية حصراً) خلال الفترة من كانون الثاني 1996 وحتى شهر نيسان 2007 باستخدام كلمات البحث Darunavir وTMC114. كما تم البحث في مقالات اللقاءات العلمية ذات الصلة من سنة 2000 وحتى 2007، بالإضافة إلى تصفح الموقع الالكتروني لهيئة الغذاء والدواء في الولايات المتحدة FDA للإطلاع على ملخصات الأدوية الجديدة والمعلومات الواردة عنها.

النتائج: أوردت ست دراسات محافظة الـDarunavir على فعالية مضادة للفيروسات الإرتجاعية ضد فيروس HIV عند وجود طفرات في مثبطات البروتياز، أما المعطيات حول الفعالية السريرية وسلامة استخدام هذا الدواء فكانت محدودة بأربع دراسات مضبوطة بشاهد ودراستين غير مضبوطتين بشاهد. بينت دراستان سريريتان كبيرتان بالطور Phase IIb أن تثبيط الفيروس إلى مستويات غير قابلة للكشف خلال 48 أسبوعاً قد تحقق عند 45% من المرضى المعالجين باستخدام Darunavir مقارنة بـ10% في مجموعة الشاهد P<0.001، كما أن إضافة enfuvirtide قد عززت هذه الاستجابة إلى 58% مقارنة بـ11% عند المرضى الذين لم تطبق لديهم هذه الإضافة P<0.001. شملت التأثيرات الجانبية الأكثر تواردا الأعراض المعدية المعوية، الغثيان والصداع.

الاستنتاجات: يتميز عقار Darunavir بفعالية أفضل عند مرضى الذراري المقاومة من فيروس HIV والذين تحددت الخيارات العلاجية الممكنة لديهم، كما أن هذه الفعالية تتعزز أكثر عند مشاركته مع الـenfuvirtide. وبالاعتماد على المعطيات المبدئية المتوافرة فإن سلامة استخدام Darunavir تشبه سلامة مثبطات البروتياز الأخرى.

Hematology & Oncology
أمراض الدم والأورام

Trends in Epidemiology and Management of Breast Cancer in Developing Arab Countries: A Literature and Registry Analysis
التوجهات المتبعة في وبائيات وتدبير سرطان الثدي في البلدان العربية النامية: تحليل في السجلات والمنشورات الطبية

El Saghir NS, et al.
PubMed Int J Surg 2007 Aug; 5(4):225-33.

Background: Registries and research on breast cancer in Arabic and developing countries are limited.
Methods: We searched PubMed, Medline, WHO and IAEA publications, national, regional, hospital tumor registries and abstracts. We reviewed and analyzed available data on epidemiological trends and management of breast cancer in Arab countries, and compared it to current international standards of early detection, surgery and radiation therapy.
Results: Breast cancer constitutes 13-35% of all female cancers. Almost half of patients are below 50 and median age is 49-52 years as compared to 63 in industrialized nations. A recent rise of Age-Standardized Incidence Rates (ASR) is noted. Advanced disease remains very common in Egypt, Tunisia, Saudi Arabia, Syria, Palestinians and others. Mastectomy is still performed in more than 80% of women with breast cancer. There are only 84 radiation therapy centers, 256 radiation oncologists and 473 radiation technologists in all Arab countries, as compared with 1875, 3068 and 5155, respectively, in the USA, which has an equivalent population of about 300 million. Population-based screening is rarely practiced. Results from recent campaigns and studies show a positive impact of clinical breast examination leading to more early diagnosis and breast-conserving surgery.
Conclusion: Breast cancer is the most common cancer among women in Arab countries with a young age of around 50 years at presentation. Locally advanced disease is very common and total mastectomy is the most commonly performed surgery. Awareness campaigns and value of clinical breast examination were validated in the Cairo Breast Cancer Screening Trial. More radiation centers and early detection would optimize care and reduce the

currently high rate of total mastectomies. Population-based screening in those countries with affluent resources and accessible care should be implemented.

خلفية الدراسة: إن السجلات والأبحاث حول سرطان الثدي في البلدان العربية النامية ما تزال محدودة.

طرق الدراسة: تم إجراء بحث في PubMed، MEDLINE، منشورات IAEA ومنظمة الصحة العالمية WHO، الملخصات والسجلات الدولية الإقليمية وسجلات المشافي حول الحالات الورمية. تمت مراجعة وتحليل البيانات المتوافرة حول التوجهات الوبائية وتدبير سرطان الثدي في البلدان العربية ومقارنتها بالمعايير الدولية الحالية حول الكشف المبكر، الجراحة والعلاج الشعاعي والكيماوي.

النتائج: يشكل سرطان الثدي 13–35% من مجمل الخباثات عند الأنثى. لوحظ أن نصف المريضات تقريباً هن دون الخمسين من العمر (بعمر وسطي 49–52 سنة) مقارنةً بـــ63 سنة في البلدان الصناعية. لوحظ مؤخراً ارتفاع في معدلات الحدوث المعيارية نسبةً للعمر ASR، كما أن الحالات المتقدمة ما تزال شائعة وبشكل كبير في مصر، تونس، المملكة العربية السعودية، سوريا، وبين الفلسطينيين والدول الأخرى. ما تزال عملية استئصال الثدي تُجرى عند أكثر من 80% من النساء المصابات بسرطان الثدي. يوجد 84 مركزاً للمعالجة الشعاعية فقط، كما يوجد 256 مختصاً بعلم الأورام الشعاعي،473 تقني شعاعي في مجمل الدول العربية، مقارنةً بـــ1875، 3068، 5155 على الترتيب في الولايات المتحدة التي يبلغ تعداد سكانها 300 مليون نسمة. إن المسح السكاني نادراً ما يطبق في الدول العربية. أظهرت نتائج الدراسات والحملات المجراة مؤخراً تأثيراً إيجابياً للفحص السريري للثدي الذي ساهم في تشخيص الحالات بشكل أبكر مع كفاية الجراحات المحافظة على الثدي في تدبير الحالة.

الاستنتاجات: يعتبر سرطان الثدي أشيع السرطانات عن النساء في البلدان العربية مع حدوثه بعمر مبكر يقدر بحدود 50 عند التظاهر الأول للورم. إن الحالات السرطانية المتقدمة موضعياً تعتبر شائعةً جداً، كما أن استئصال الثدي الكلي هو الإجراء الجراحي الأكثر تطبيقاً. تم تأكيد دور حملات التوعية وأهمية الفحص السريري من خلال تجارب المسح عن سرطان الثدي المجراة في القاهرة. إن إنشاء مراكز جديدة للمعالجة الشعاعية، واتخاذ الوسائل الكفيلة بالكشف الباكر عن سرطان الثدي سوف يحسن من مستوى العناية الطبية المقدمة للمرضى ويقلل من النسبة الحالية المرتفعة لاستئصال الثدي الكلي. كما يجب تطبيق عمليات المسح السكانية في الدول العربية مع زيادة توفير مراكز العناية الصحية.

Low-Molecular-Weight Heparin in Cancer-Associated Thrombosis: Treatment, Secondary Prevention, and Survival

الهيبارين منخفض الوزن الجزيئي LMWH في الخثارات المرافقة للسرطان: المعالجة، الوقاية الثانوية، ونسب البقيا

Nishioka J, et al.
J Oncol Pharm Pract. 2007 Jun;13(2):85-97.

Objectives: Venous thromboembolism (VTE) occurs more frequently in cancer patients than in non-cancer patients and outcomes are poor in patients with both cancer and thrombosis. Patients with cancer who develop thrombosis are more likely to experience a recurrence of VTE and have increased bleeding complications while receiving oral anticoagulant treatment. The purpose of this paper is to discuss the causes and outcomes of thrombosis in cancer patients, the limitations of warfarin therapy, the guidelines and data for the use of low-molecular-weight heparins (LMWHs) in the treatment and secondary prevention of thrombosis in cancer patients, and emerging data regarding survival with the use of LMWH in cancer patients.

Methods: Literature for this paper has been collected using multiple sources, including primary, secondary, and tertiary references. Online searches have been conducted utilizing the PubMed and OVID databases, and abstracts from the Proceedings of the American Society of Clinical Oncology and the American Society of Hematology Annual Meeting and Exhibition. The following key terms were used in the search: cancer, deep vein thrombosis, pulmonary embolism, anticoagulation, LMWHs, guidelines, survival, cost.

Results: The long-term use of LMWHs in the settings of cancer and thrombosis are supported by recent clinical trial evidence that demonstrate their equivalent safety and improved efficacy when compared to oral anticoagulants resulting in their inclusion in current guidelines. Finally, newer studies offer further evidence of improved outcomes with dalteparin and nadroparin, including possible survival benefits.

Conclusion: Treatment with LMWHs has been shown to be more effective than warfarin in the extended treatment of VTE in patients with cancer and is safe in this setting. Use of a LMWH for at least the first 3 6 months of long-term treatment is now considered the standard of care for patients with cancer and is recommended in numerous guidelines. Additionally, further evaluation of the survival benefits of LMWH in cancer patients is warranted.

هدف الدراسة: يحدث الانصمام الوريدي الخثري Venous Thromboembolism (VTE) بشكل أكثر تواتراً عند مرضى السرطان مقارنة ببقية المرضى، كما أن حصيلة الداء تكون سيئة في مثل هذه الحالات. تتميز حالات الخثار لدى مرضى السرطان بكونها أكثر قابلية للنكس، مع زيادة في حدوث الاختلاطات النزفية في سياق المعالجة بمضادات التخثر الفموية. يهدف هذا البحث إلى مناقشة أسباب وحصيلة الخثار عند مرضى السرطان، معوقات استخدام المعالجة بالوارفارين، التوجيهات والمعطيات حول استخدام الهيبارينات منخفضة الوزن الجزيئي (LMWHs) في المعالجة والوقاية الثانوية لحالات الخثار عند مرضى السرطان، والمعطيات الجديدة حول نسب البقيا الملاحظة باستخدام الهيبارين منخفض الوزن الجزيئي.

منهجية الدراسة: تم جمع مادة هذه الدراسة من مصادر متعددة تتضمن المراجع الأولية، الثانوية والثالثية. تم إجراء بحث على الشبكة العالمية WWW باستخدام قاعدة بيانات PubMed وOVID، وملخصات أعمال الجمعية الأمريكية لعلم الأورام السريري واللقاءات والعروض الدورية للجمعية الأمريكية لأمراض الدم. استخدمت الكلمات المفتاحية التالية في البحث: سرطان، الخثار الوريدي العميق، الصمة الرئوية، مضادات التخثر، الهيبارين منخفض الوزن الجزيئي، التوجيهات، البقيا، التكلفة.

النتائج: لقد دعمت الدراسات السريرية الحديثة الاستخدام المطول للهيبارين منخفض الوزن الجزيئي في حالات الخثار عند مرضى السرطان، كما أظهرت سلامة مكافئة مع فعالية أفضل مقارنة بمضادات التخثر الفموية الأمر الذي أفضى إلى تضمينها في التوجيهات الحديثة في تدبير هذه الحالات. أخيراً، فإن الدراسات الأحدث تقدم دلائل إضافية على تحسن حصيلة المرض باستخدام deltaparin وnadroparin وقد يكون من ضمن ذلك التحسن في نسب البقيا.

الاستنتاجات: لقد أظهر الهيبارين منخفض الوزن الجزيئي فعالية أكبر مقارنة بالوارفارين في المعالجة المطولة للانصمام الوريدي الخثري عند مرضى السرطان، كما ظهرت سلامة استخدامه في هذه الحالات. إن استخدام الهيبارين منخفض الوزن الجزيئي لمدة 3–6 أشهر على الأقل من المعالجة المطولة يعتبر حالياً من الأمور القياسية في العناية بمرضى السرطان، كما أن الكثير من الدراسات توصي بذلك. بالإضافة لما سبق، فما تزال هناك حاجة للمزيد من الدراسات لتقييم فوائد الهيبارين منخفض الوزن الجزيئي على معدلات البقيا عند مرضى السرطان.

Endocrinology, Metabolism, &Diabetes Mellitus
أمراض الغدد الصم والاستقلاب والداء السكري

Reversal of Idiopathic Hypogonadotropic Hypogonadism
تراجع حالات قصور الأقناد لمجهول السبب بنقص الحاثات القندية

Raivio T, et al.
NEJM 2007 Aug 30;357(9):863-873.

Background: Idiopathic hypogonadotropic hypogonadism, which may be associated with anosmia (the Kallmann syndrome) or with a normal sense of smell, is a treatable form of male infertility caused by a congenital defect in the secretion or action of gonadotropin-releasing hormone (GnRH). Patients have absent or incomplete sexual maturation by the age of 18. Idiopathic hypogonadotropic hypogonadism was previously thought to require lifelong therapy. We describe 15 men in whom reversal of idiopathic hypogonadotropic hypogonadism was sustained after discontinuation of hormonal therapy.

Methods: We defined the sustained reversal of idiopathic hypogonadotropic hypogonadism as the presence of normal adult testosterone levels after hormonal therapy was discontinued.

Results: Ten sustained reversals were identified retrospectively. Five sustained reversals were identified prospectively among 50 men with idiopathic hypogonadotropic hypogonadism after a mean (±SD) duration of treatment interruption of 6±3 weeks. Of the 15 men who had a sustained reversal, 4 had anosmia. At initial

evaluation, 6 men had absent puberty, 9 had partial puberty, and all had abnormal secretion of GnRH-induced luteinizing hormone. All 15 men had received previous hormonal therapy to induce virilization, fertility, or both. Among those whose hypogonadism was reversed, the mean serum level of endogenous testosterone increased from 55±29 ng per deciliter (1.9±1.0 nmol per liter) to 386±91 ng per deciliter (13.4±3.2 nmol per liter, P<0.001), the luteinizing hormone level increased from 2.7±2.0 to 8.5±4.6 IU per liter (P<0.001), the level of follicle-stimulating hormone increased from 2.5±1.7 to 9.5±12.2 IU per liter (P<0.01), and testicular volume increased from 8±5 to 16±7 ml (P<0.001). Pulsatile luteinizing hormone secretion and spermatogenesis were documented.
Conclusion: Sustained reversal of normosmic idiopathic hypogonadotropic hypogonadism and the Kallmann syndrome was noted after discontinuation of treatment in about 10% of patients with either absent or partial puberty. Therefore, brief discontinuation of hormonal therapy to assess reversibility of hypogonadotropic hypogonadism is reasonable.

خلفية الدراسة: يعتبر قصور الأقناد المجهول السبب بنقص الحاثات القندية – والذي قد يترافق مع فقد للشم (متلازمة Kallmann) أو مع حاسة شم طبيعية– أحد أشكال العقم الذكري القابلة للعلاج، تنتج هذه الحالة عن خلل في إفراز أو فعالية الهرمون المحرر للحاثات التناسلية (GnRH)، يتميز المرضى بغياب أو نقص في النضوج الجنسي بسن 18 سنة. اعتقد سابقاً أن قصور الأقناد المجهول السبب بنقص الحاثات القندية يحتاج لمعالجة دائمة مدى الحياة، إلا أنه تم وصف حالة 15 رجلاً استمر تراجع الحالة لديهم حتى بعد إيقاف المعالجة الهرمونية.
طريقة الدراسة: تم تعريف استمرار تراجع قصور الأقناد المجهول السبب بنقص الحاثات القندية بوجود مستويات طبيعية من التستوستيرون عند البالغ بعد إيقاف المعالجة الهرمونية.
النتائج: تم تسجيل تراجع لـ10 حالات بشكل استعادي (راجع)، كما تم التعرف مستقبلياً على 5 حالات تراجع مستمر من بين 50 حالة من حالات قصور الأقناد المجهول السبب بنقص الحاثات القندية بعد فترة وسطية من إيقاف العلاج 6±3 أسابيع. ومن بين الحالات 15 التي حققت تراجعاً، عانى المرضى في 4 منها من فقدان للشم، كما أن التقييم الأولي لهذه الحالات كشف عن وجود غياب كامل للبلوغ (6 حالات)، بلوغ جزئي (9 حالات)، بينما لوحظت شذوذات في إفراز الهرمون الملوتن LH المحرض بالهرمون المحرر للحاثات التناسلية (GnRH) في كل الحالات دون استثناء. لقد تمت معالجة جميع هذه الحالات سابقاً بمعالجة هرمونية لتحريض التذكير، الخصوبة، أو كلاهما. وفي الحالات التي تراجع فيها قصور الأقناد، فإن المستويات الوسطية للتستوستيرون المصلي داخلي المنشأ ازدادت من 55±29 نانوغرام/دل (1.9±1.0 نانومول/ل) إلى 386±91 نانوغرام/دل (13.4±3.2 نانومول/ل، P<0.001)، بينما ازدادت مستويات الهرمون الملوتن LH من 2.7±2.0 إلى 8.5±4.6 وحدة دولية/ل (P<0.001)، أما مستويات الهرمون الحاث للجريبات FSH فازدادت من 2.5±1.7 إلى 9.5±12.2 وحدة دولية/ل (P<0.01)، في حين ازداد حجم الخصية من 8±5 إلى 16±7 مل (P<0.001). علاوة على ما سبق فقد تأكد وجود إفراز نبضي للهرمون الملوتن وتشكل للنطاف.
الاستنتاجات: لقد لوحظ تراجع في حالات قصور الأقناد المجهول السبب بنقص الحاثات القندية طبيعي حاسة الشم ومتلازمة Kallmann عند 10% من المرضى إثر إيقاف المعالجة، ولهذا فإن إيقاف المعالجة الهرمونية لفترة وجيزة لتقييم مدى قابلية هذه الحالات للتراجع هو أمر منطقي تبرره الموجودات السابقة.

Nephrology & Urology
أمراض الكلية والجهاز البولي

Penile Replantation, Science or Myth? A Systematic Review
إعادة زرع القضيب، حقيقة علمية أم أسطورة؟ مراجعة منهجية

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Introduction: Penile amputation is a rare urologic condition for which immediate surgical replantation is warranted. The surgical technique used for repair has been modified and refined. Our aim was to assess the effects of several interventions and management for amputated penis after replantation.
Materials And Methods: We searched the MEDLINE (January 1966 to May 2007), EMBASE (January 1988 to January 2007), CINAHL (January 1982 to January 2007), PsycLIT (January 1984 to January 2007), ERIC (January

1984 to January 2007), and the bibliographic data of relevant articles; hand-searched conference proceedings; and contacted investigators to locate studies. All reported cases of penile replantation were studied. We assessed all titles, abstracts, and extracted data from the articles identified for inclusion. Outcome measures included cosmetic outcomes, acceptability, operative time, restoration of erectile function, sensibility of the glans, and long-term outcomes.

Results: Eighty patients had undergone penile replantation. There was considerable variation in the interventions, patients, and outcome measures. The majority of the reported cases in this area continue to be of moderate quality, although more recent cases have been of higher quality in terms of both patients' demographics and surgical techniques. Data were not available in all of the cases for many of the outcomes expected to be reported. There were several important variations in the cases studied.

Conclusion: The value of the various microsurgical techniques for replantation of the penis remains uncertain. Meticulous microsurgical techniques by experienced surgeons can reduce skin, urethra, and graft loss complications and produce a functional organ; nonetheless, such complications are still highly prevalent.

المقدمة: يعتبر بتر القضيب من الحالات الطبية البولية النادرة والتي تتطلب تدخلاً جراحياً إسعافياً لإعادة الزرع. لقد طرأت عدة تعديلات وتحسينات على التقنية الجراحية المستخدمة في الترميم. تهدف هذه الدراسة إلى تقييم تأثير التداخلات والتدابير المختلفة لحالات بتر القضيب وذلك بعد إعادة الزرع.

المواد وطرق الدراسة: تم إجراء بحث عبر المنشورات الطبية MEDLINE (من كانون الثاني 1966 وحتى أيار2007)، EMBASE (من كانون الثاني 1988 وحتى نفس الشهر من عام 2007)، CINAHL (من كانون الثاني 1982 وحتى كانون الثاني 2007)، PsycLIT (من كانون الثاني 1984 وحتى نفس الشهر من عام 2007)، ERIC (من كانون الثاني 1984 وحتى كانون الثاني 2007)، البيانات المرجعية للمقالات ذات الصلة بالموضوع، ملخصات أعمال اللقاءات البحثية، كما تم الاتصال مع الباحثين للإطلاع على الدراسات المناسبة. تمت دراسة جميع حالات إعادة زرع القضيب، كما تم تقييم جميع العناوين والملخصات البحثية والمعطيات المستخلصة من المقالات. تم قياس النتائج بالاعتماد على عدة نقاط: النتائج التجميلية، مدى القبولية acceptability، مدة العملية، استعادة الوظيفة الانتصابية، حساسية الحشفة، بالإضافة إلى النتائج الملاحظة على المدى البعيد.

النتائج: خضع 80 مريضاً لإعادة زرع القضيب، مع اختلافات كبيرة في التداخلات المتبعة، والمرضى، وقياسات النتائج. إن غالبية الحالات الواردة كانت ذات جودة متوسطة على الرغم من أن الحالات الأحدث أبدت جودة أفضل وفق الدراسة الإحصائية السكانية للمرضى والتقنيات الجراحية. لوحظ في بعض الحالات وجود نقص في بيانات الكثير من النتائج المتوقع متابعتها، كما لوحظ وجود اختلافات متعددة ومهمة في نوعية الحالات المدروسة.

الاستنتاجات: تبقى أهمية التقنيات الجراحية الدقيقة المتنوعة في إعادة زرع القضيب غير مؤكدة. إن تطبيق التقنيات الجراحية الدقيقة بيد جراح خبير يمكن أن يقلل من اختلاطات خسارة الجلد أو الإحليل أو الطُعم، ويقود من جهة أخرى إلى سلامة وظيفة العضو، إلا أن هذه الاختلاطات مازالت منتشرة رغم كل الاحتياطات المطبقة.

Interventions for Primary Vesicoureteric Reflux
التداخلات المطبقة لتصحيح الجذر المثاني الحالبي الأولي

Hodson EM, et al.
PubMed Cochrane Database Syst Rev. 2007 Jul 18;(3):CD001532

Background: Vesicoureteric reflux (VUR) results in urine passing, in a retrograde manner, up the ureter. Urinary tract infections (UTIs) have been considered the main cause of permanent renal parenchymal damage in children with reflux. Management of these children has been directed at preventing infection by antibiotic prophylaxis and/or surgical correction of reflux. Controversy remains as to the optimum strategies.

Objectives: To evaluate the benefits and harms of different treatment options for primary VUR.

Search Strategy: Randomised controlled trials (RCTs) were identified from the Cochrane Central Register of Controlled Trials, MEDLINE, EMBASE, reference lists of articles and abstracts from conference proceedings.

Date of last search: June 2006

Selection Criteria: Any treatment of VUR including surgery, antibiotic prophylaxis of any duration, non-invasive techniques and any combination of therapies.
Data Collection and Analysis: Two authors independently searched the literature, determined study eligibility, assessed quality, extracted and entered data. For dichotomous outcomes, results were expressed as relative risk (RR) and 95% confidence intervals (CI). Data were pooled using the random effects model.
Main Results: Eleven studies (1148 children) were identified. Seven compared correction of VUR (by surgery or endoscope) plus antibiotics for 1-24 months with antibiotics alone, two compared antibiotics with no treatment and two compared different materials for endoscopic correction of VUR. Risk of UTI by 2, 5 and 10 years was not significantly different between surgical and medical groups (2 years RR 1.07, 95% CI 0.32 to 2.09; 5 years RR 0.99, 95% CI 0.79 to 1.26; 10 years RR 1.06, 95% CI 0.78 to 1.44). Combined treatment resulted in a 50% reduction in febrile UTI by 10 years (RR 0.54, 95% CI 0.55 to 0.92) but no concomitant reduction in risk of new or progressive renal damage by 10 years (RR 1.03, 95% CI 0.53 to 2.00). In two small studies no significant differences in risk for UTI (RR 0.75, 95% CI 0.15 to 3.84) or renal damage (RR 1.70, 95% CI 0.36 to 8.07) were found between antibiotic prophylaxis and no treatment.
Authors' Conclusion: It is uncertain whether the treatment of children with VUR confers clinically important benefit. The additional benefit of surgery over antibiotics alone is small at best. Assuming a UTI rate of 20% for children with VUR on antibiotics for five years, nine reimplantations would be required to prevent one febrile UTI, with no reduction in the number of children developing any UTI or renal damage.

خلفية الدراسة: يؤدي الجذر المثاني الحالبي VUR إلى مرور البول بالطريق الراجع من المثانة إلى الحالب، وقد اعتبرت الانتانات في السبيل البولي UTIs السبب الأساسي في الأذية البرانشيمية الكلوية الدائمة عند الأطفال المصابين بهذه الحالة. لقد توجهت التدابير المتبعة في هذه الحالة إلى الوقاية من الإنتان من خلال استخدام الصادات الحيوية مع أو بدون إجراء تصحيح جراحي لحالة الجذر، وما يزال هناك جدل واسع حول المنهجية المثالية الواجب اعتمادها في تدبير مثل هذه الحالات.

هدف الدراسة: تقييم فوائد ومضار الخيارات العلاجية المختلفة في الجذر المثاني الحالبي الأولي VUR.

منهجية البحث: تم استعراض الدراسات العشوائية المضبوطة بشاهد باستخدام بيانات السجلات المركزية للدراسات المضبوطة بشاهد، MEDLINE, EMBASE، القائمة المرجعية للمقالات وملخصات أعمال اللقاءات العلمية، تمت آخر عملية بحث في حزيران 2006.

معايير اختيار الدراسات: تم اختيار جميع المعالجات المطبقة في الجذر المثاني الحالبي من ضمنها المعالجة الجراحية، الوقاية بالصادات الحيوية ضمن أية مدة، التقنيات غير الغازية أو أية مشاركة بين العلاجات المختلفة.

جمع المعطيات وتحليلها: قام باحثان –وبشكل مستقل– بعملية البحث عبر المنشورات الطبية وتحديد أهلية كل دراسة لتضمينها في البحث، كما تم تقييم جودة الدراسة واستخلاص البيانات وتنظيمها. بالنسبة للنتائج الثنائية التفرع فقد تم عرض النتائج كخطورة نسبية RR وفواصل ثقة 95 %. تم تجميع المعطيات باستخدام نموذج التأثيرات العشوائية.

النتائج الأساسية: تم تحديد 11 دراسة (عدد الحالات 1148 حالة)، قامت 7 منها بالمقارنة بين تصحيح الجذر المثاني الحالبي (بواسطة الجراحة أو التنظير) مع إضافة الصادات الحيوية لمدة تتراوح بين 1–24 شهراً، والمعالجة بالصادات بشكل منفرد. قامت دراستان بمقارنة المعالجة بالصادات مع عدم اتخاذ أية تدابير علاجية، في حين قارنت دراستان أخريان بين الطرق التنظيرية المختلفة في تصحيح الجذر. لم تلاحظ فروقات هامة في خطورة الجذر المثاني الحالبي بعمر 2.5 سنة و10 سنوات بين مجموعة الجراحة ومجموعة العلاج الطبي (نسبة الأرجحية بعمر سنتين OR=1.07، فواصل الثقة 95%، 0.32 إلى 2.09، نسبة الأرجحية بعمر 5 سنوات OR=0.99، فواصل الثقة 95%، 0.79 إلى 1.26، نسبة الأرجحية بعمر 10 سنوات OR=1.06، فواصل الثقة 95%، 0.78 إلى 1.44). أدى تطبيق مشاركة بين العلاجات إلى انخفاض بمقدار 50% في حالات انتانات السبيل البولي الحموية بعمر 10 سنوات (نسبة الأرجحية OR=0.54، فواصل الثقة 95%، 0.55 إلى 0.92) ولكن دون وجود تراجع موازٍ في تطور أذية كلوية جديدة أو مترقية بعمر 10 سنوات (نسبة الأرجحية OR=1.03، فواصل الثقة 95%، 0.53 إلى 2.00). بينت دراستان صغيرتان عدم وجود فروقات هامة في خطورة حدوث انتانات السبيل البولي (نسبة الأرجحية OR=0.75، فواصل الثقة 95%، 0.15 إلى 3.84) أو الأذية الكلوية (نسبة الأرجحية OR=1.70، فواصل الثقة 95%، 0.36 إلى 8.07) بين تطبيق الوقاية بالصادات الحيوية أو عدم اعتماد أية معالجة.

الاستنتاجات: من غير المؤكد فيما إذا كانت معالجة الأطفال المصابين بالجذر المثاني الحالبي VUR تعطي منافع هامة من الناحية السريرية. من جهة أخرى فإن الفائدة الإضافية للجراحة على استخدام الصادات بشكل منفرد هي فائدة محدودة في أفضل الحالات. وبافتراض أن معدل حدوث إنتان بولي عند الأطفال المصابين بالجذر هو 20% باستخدام الصادات الحيوية لمدة 5 سنوات، فإنه يجب إجراء تسع عمليات إعادة زرع للحالب للوقاية من حالة واحدة فقط من انتانات السبيل البولي الحموية UTI عند مرضى الجذر، دون وجود تراجع في عدد الأطفال الذين يطورون انتانات بولية أخرى أو أذية كلوية.

Rheumatology & Orthopedics
الأمراض الرثوية وأمراض العظام

Subclinical Hypercortisolism Among Outpatients Referred for Osteoporosis
فرط كورتيزول الدم تحت السريري عند المرضى الخارجيين المحولين بحالة هشاشة عظام

Chiodini L, et al.
Annals 2007 Oct 16;147(8):541-548.

Background: Hypercortisolism is known to cause osteoporosis.
Objective: To evaluate the prevalence of subclinical hypercortisolism in participants referred for evaluation of osteoporosis.
Design: Cross-sectional study.
Setting: Two community hospitals and research institutes in Italy.
Patients: 219 patients without clinically overt hypercortisolism or other secondary causes of osteoporosis who were referred for evaluation of osteoporosis between January 2005 and December 2005.
Measurements: Bone mineral density was measured by using dual-energy x-ray absorptiometry, and hypercortisolism was assessed with serum cortisol levels after a dexamethasone suppression test. Also measured were 24-hour urinary free cortisol levels and midnight plasma cortisol levels.
Results: Seven of 65 patients with T-scores of 2.5 or less and vertebral fractures had subclinical hypercortisolism (prevalence, 10.8% [95% CI, 3.23% to 18.31%]). This prevalence was 4.8% (CI, 1.32% to 8.20%) among patients with osteoporosis. In multivariable analyses adjusted for age, sex, and body mass index, a positive dexamethasone suppression test result was associated with the presence of osteoporosis (odds ratio, 3.37 [CI, 1.78 to 6.43]; $P < 0.001$) and vertebral fractures (odds ratio, 1.70 [CI, 1.04 to 2.79]; $P = 0.035$).
Limitations: The study was conducted in a referral setting; its findings may not apply to the general population.
Conclusion: Subclinical hypercortisolism may be more common than is generally recognized in patients with osteoporosis in whom secondary causes of osteoporosis have been excluded.

خلفية الدراسة: يعتبر فرط كورتيزول الدم من الحالات المعروف تسببها بهشاشة عظام.
هدف الدراسة: تقييم انتشار حالات فرط كورتيزول الدم تحت السريرية عند المرضى المحولين لدراسة حالة هشاشة العظام لديهم.
نمط الدراسة: دراسة عينة نموذجية cross-sectional.
مكان الدراسة: تمت الدراسة في مشفيين عموميين بمشاركة مركزي أبحاث في إيطاليا.
مرضى الدراسة: شملت الدراسة 219 مريضاً ليس لديهم فرط كورتيزول الدم واضح سريرياً، كمالا يوجد لديهم أسباب ثانوية للإصابة بهشاشة العظام، حول هؤلاء المرضى لتقييم هشاشة العظام لديهم في الفترة بين كانون الثاني2005 وكانون الأول من نفس العام.
القياسات: تم قياس الكثافة العظمية المعدنية باستخدام مقياس امتصاص أشعة X مزدوج الطاقة (Dual energy)، كما تم تقييم فرط كورتيزول الدم من خلال مستويات الكورتيزول المصلية بعد اختبار التثبيط بالديكساميتازون. بالإضافة لما سبق فقد تم قياس مستويات الكورتيزول الحر في بول 24 ساعة ومستويات الكورتيزول المصلية في منتصف الليل.
النتائج: لوحظ وجود حالة فرط كورتيزول الدم تحت السريري لدى 7 من أصل 56 مريضاً لديهم مجموع نقاط T يعادل 2.5 أو أقل مع وجود كسور فقرية (الانتشار 10.8%، بفواصل ثقة 95%، 3.23% إلى 18.31%)، في حين كانت نسبة الانتشار 4.8% (فواصل ثقة 1.32 % إلى 8.20%) عند مرضى هشاشة العظام. وباستخدام التحليل المتعدد المتغيرات المعدل نسبةً للعمر، الجنس، ومشعر كتلة الجسم BMI،

ترافقت إيجابية اختبار التثبيط بالديكساميتازون مع وجود هشاشة عظام (بنسبة أرجحية 3.37، فواصل الثقة 1.78 إلى6.43، قيمة P<0.001)، ومع كسور فقرية (بنسبة أرجحية 1.07، فواصل الثقة 1.04 إلى 2.79، قيمة P=0.035)،

محدودية الدراسة: أجريت هذه الدراسة على أساس تحويل المرضى للدراسة، ولهذا فإن نتائجها قد لا تطبق على السكان بشكل عام.

الاستنتاجات: إن فرط كورتيزول الدم تحت السريري قد يكون أكثر شيوعاً مما هو معروف عادة عند مرضى هشاشة العظام الذين تم نفي وجود أسباب ثانوية لهشاشة العظام لديهم.

Knee Buckling: Prevalence, Risk Factors, and Associated Limitations in Function
انبعاج الركبة: الانتشار، عوامل الخطورة، والتحدد الوظيفي المرافق

Felson DT, et al.
Annals 2007 Oct 16;147 (8):534-540.

Background: Knee buckling is common in persons with advanced knee osteoarthritis and after orthopedic procedures. Its prevalence in the community is unknown.
Objective: To examine the prevalence of knee buckling in the community, its associated risk factors, and its relation to functional limitation.
Design: Cross-sectional, population-based study.
Setting: The Framingham Osteoarthritis Study.
Participants: 2351 men and women age 36 to 94 years (median, 63.5 years).
Measurements: Participants were asked whether they had experienced knee buckling or "giving way" and whether it led to falling. They were also asked about knee pain and limitations in function by using the Short Form-12 and Western Ontario and McMaster Universities Osteoarthritis Index, had isometric tests of quadriceps strength, and underwent weight-bearing radiography and magnetic resonance imaging of the knee. Radiographs were scored for osteoarthritis by using the Kellgren Lawrence scale, and magnetic resonance images were read for anterior cruciate ligament tears. The relationship of buckling to functional limitation was examined by using logistic regression that adjusted for age, sex, body mass index, and knee pain severity.
Results: Two hundred seventy-eight participants (11.8%) experienced at least 1 episode of knee buckling within the past 3 months; of these persons, 217 (78.1%) experienced more than 1 episode and 35 (12.6%) fell during an episode. Buckling was independently associated with the presence of knee pain and with quadriceps weakness. Over half of those with buckling had no osteoarthritis on radiography. Persons with knee buckling had worse physical function than those without buckling, even after adjustment for severity of knee pain and weakness. For example, 46.9% of participants with buckling and 21.7% of those without buckling reported limitations in their work (adjusted odds ratio, 2.0 [95% CI, 1.5 to 2.7]).
Limitation: Causal inferences are limited because of the study's cross-sectional design.
Conclusion: In adults, knee buckling is common and is associated with functional loss.

خلفية الدراسة: تعتبر حالة انبعاج الركبة من الحالات الشائعة عند مرضى الالتهاب العظمي المفصلي Osteoarthritis المتقدم في مفصل الركبة وبعد إجراءات الجراحة العظمية التقويمية، إلا أن انتشارها في المجتمع غير معروف.

هدف الدراسة: تحديد انتشار انبعاج الركبة في المجتمع، عوامل الخطورة المرافقة له، وعلاقته بالقصور الوظيفي للمفصل.

نمط الدراسة: دراسة عينة نموذجية cross-sectional، سكانية الطبيعة.

مكان الدراسة: دراسة الالتهاب العظمي المفصلي في Framingham.

المشاركين في الدراسة: شارك في الدراسة 2351 رجلاً وامرأة أعمارهم بين 36 وحتى 94 سنة (وسطياً 63.5 سنة).

القياسات: تم سؤال المشاركين عن إصابتهم بانبعاج الركبة أو "انهيار في المفصل" وهل أدى ذلك إلى السقوط، كما تم سؤالهم عن وجود ألم في الركبة أو تحدد في حركتها باستخدام قائمة استبيان (short form-12) ومشعر الالتهاب العظمي المفصلي لجامعتي Western Ontario و McMaster، كما تم تقييم قوة العضلة رباعية الرؤوس الفخذية من خلال الاختبارات اللاتقصّرية (isometric-tests)، مع إجراء صورة شعاعية بسيطة بوضعية الوقوف (للمفصل الحامل للوزن)، وصورة بالرنين المغناطيسي لمفصل الركبة. تمت دراسة الصور الشعاعية البسيطة لوجود التهاب عظمي مفصلي باستخدام منظومة نقاط تبعاً لسلم Kellgren-Lawrence، كما تم التركيز في صور الرنين على وجود تمزق

في الرباط المتصالب الأمامي. أما العلاقة بين الانبعاج والتحدد الوظيفي في الركبة فتم اختبارها باستخدام التقهقر المنطقي المعدّل بالنسبة للعمر، الجنس، مشعر كتلة الجسم BMI، وشدة الألم في مفصل الركبة.

النتائج: عانى 278 مريضاً (11.8%) من نوبة واحدة على الأقل من انبعاج الركبة خلال الأشهر الثلاثة الماضية، ومن بين هؤلاء فإن 217 مريضاً (78.1%) تكررت النوبة لديهم لأكثر من مرة، في حين أدت النوبة إلى حادث سقوط عند 35 مريضاً (12.6%). لقد ترافق الانبعاج مع ألم في المفصل مع ضعف في العضلة رباعية الرؤوس الفخذية. لوحظ أن نصف مرضى انبعاج الركبة لم يلاحظ لديهم ما يدل على وجود التهاب عظمي مفصلي على الصورة الشعاعية. لوحظ أن مرضى انبعاج الركبة لديهم تراجع أكبر في وظيفة المفصل مقارنة بالمرضى الذين لم يلاحظ لديهم انبعاج وذلك حتى عند تعديل شدة الألم المفصلي والضعف العضلي، مثال ذلك فإن 46.9% من المصابين بالانبعاج أظهروا تحدد في وظيفة المفصل أثر على عملهم في حين كانت هذه النسبة 21.7% عند الذين ليس لديهم انبعاج (نسبة الأرجحية المعدلة 2.0، بفواصل ثقة 95%، 1.5 إلى 2.7).

محدودية الدراسة: الاستدلالات السببية عن الحالة محدودة بسبب كون الدراسة دراسة عينة نموذجية cross-sectional study.

الاستنتاجات: يعتبر انبعاج الركبة من الحالات الشائعة لدى البالغين والتي تترافق مع قصور وظيفي في المفصل.

Laboratory Medicine
طب مخبري

Why Don't Physicians Test for HIV? A Review of the US Literature
ما سبب عدم قيام الأطباء بطلب إجراء اختبار الإيدز HIV؟ مراجعة في المنشورات الطبية في الولايات المتحدة

Burke RC, et al.
PubMed AIDS 2007 Jul 31; 21(12):1617-24

Objective: In its 2006 HIV testing guidelines, the Centers for Disease Control and Prevention (CDC) recommended routine testing in all US medical settings. Given that many physicians do not routinely test for HIV, the objective of this study was to summarize our current understanding of why US physicians do not offer HIV testing.
Design: A comprehensive review of the published and unpublished literature on HIV testing barriers was conducted.
Methods: A literature search was conducted in Pubmed using defined search terms. Other sources included Google, recent conference abstracts, and experts in the field. Studies were divided into three categories: prenatal; emergency department; and other medical settings. These categories were chosen because of differences in physician training, practice environment, and patient populations. Barriers identified in these sources were summarized separately for the three practice settings and compared.
Results: Forty-one barriers were identified from 17 reports. Twenty-four barriers were named in the prenatal setting, 20 in the emergency department setting, and 23 in other medical settings. Eight barriers were identified in all three categories: insufficient time; burdensome consent process; lack of knowledge/training; lack of patient acceptance; pretest counselling requirements; competing priorities; and inadequate reimbursement.
Conclusion: US physicians experience many policy-based, logistical, and educational barriers to HIV testing. Although some barriers are exclusive to the practice setting studied, substantial overlap was found across practice settings. Some or all of these barriers must be addressed before the CDC recommendation for routine HIV testing can be realized in all US medical settings.

هدف الدراسة: تضمنت توجيهات مراكز الوقاية والسيطرة على الأمراض في الولايات المتحدة CDC للعام 2006 ضرورة إجراء اختبار HIV بشكل روتيني لجميع المرضى في الأقسام الطبية المختلفة في مشافي الولايات المتحدة. وانطلاقاً من المعطيات التي تشير إلى أن الكثير من الأطباء لا يقومون بطلب إجراء هذا الاختبار بشكل روتيني، ستقوم هذه الدراسة بتلخيص تصورنا الحالي حول سبب عدم قيام الأطباء في الولايات المتحدة بطلب إجراء هذا الاختبار.

نمط الدراسة: سنقوم بمراجعة بحثية شاملة في المواد الطبية التي تم نشرها أو التي لم تنشر بعد حول معوقات إجراء اختبار HIV (فيروس

عوز المناعة البشري).

طرق الدراسة: تم البحث عبر PubMed باستخدام كلمات بحث محددة، كما تم البحث في مصادر أخرى شملت Google، ملخصات أعمال المؤتمرات الطبية في الفترة السابقة، وملاحظات الخبراء العاملين في المجال. تم تقسيم الدراسات إلى ثلاث مجموعات: المحيط ما قبل الولادة، قسم الإسعاف، وبيئات العمل الطبية الأخرى، وقد تم اختيار هذه المجموعات نتيجة وجود اختلاف في نمط التدريب المهني للطبيب، وطبيعة المرضى. تم التعرف على المعوقات من خلال هذه المصادر وتم تلخيصها نسبةً لكل مجموعة ومن ثم إجراء مقارنات فيما بينها.

النتائج: تم التعرف على 41 من العوامل المعوقة من خلال 17 تقرير، منها 24 في المحيط ما قبل الولادة، 20 في قسم الإسعاف، و23 في البيئات الطبية الأخرى. تم ملاحظة 8 معوقات مشتركة في المجموعات الثلاث على حد سواء وهي: ضيق الوقت، إجراءات موافقة المريض المرهقة، نقص التأهيل العلمي،عدم قبول المريض، الاستشارات اللازمة قبل الاختبار، وجود أولويات أخرى يجب القيام بها، ونقص التعويض.

الاستنتاجات: يواجه الأطباء في الولايات المتحدة الكثير من الحواجز الثقافية والحواجز الأخرى المتعلقة بسير العمل التي تعيق إجراء اختبار HIV. وعلى الرغم من اقتصار وجود حواجز معينة حصرياً على أقسام بعينها، إلا أنه يلاحظ تداخل واضح في نوعية هذه المعوقات ضمن الأقسام المختلفة. يجب التركيز على إيجاد حلول لبعض أو كل هذه المعوقات قبل الوصول لتحقيق توجيهات مراكز الوقاية والسيطرة على الأمراض CDC في الأقسام الطبية المختلفة.

Psychiatry
طب نفسي

Physical Illness and Schizophrenia: A Review of the Literature
الفصام والأمراض الجسدية: مراجعة في المنشورات الطبية

Leucht S, et al.
PubMed 2007 Nov 116(5):317-33.

Objective: The lifespan of people with schizophrenia is shortened compared to the general population. We reviewed the literature on comorbid physical diseases in schizophrenia to provide a basis for initiatives to fight this unacceptable situation.

Method: We searched MEDLINE (1966 - May 2006) combining the MeSH term of schizophrenia with the 23 MeSH terms of general physical disease categories to identify relevant epidemiological studies.

Results: A total of 44 202 abstracts were screened. People with schizophrenia have higher prevalences of HIV infection and hepatitis, osteoporosis, altered pain sensitivity, sexual dysfunction, obstetric complications, cardiovascular diseases, overweight, diabetes, dental problems, and polydipsia than the general population. Rheumatoid arthritis and cancer may occur less frequently than in the general population. Eighty-six per cent of the studies came from industrialized countries limiting the generalizability of the findings.

Conclusion: The increased frequency of physical diseases in schizophrenia might be on account of factors related to schizophrenia and its treatment, but undoubtedly also results from the unsatisfactory organization of health services, from the attitudes of medical doctors, and the social stigma ascribed to the schizophrenic patients.

هدف الدراسة: يتميز معدل الحياة عند مرضى الفصام بكونه أقصر بالمقارنة مع عموم السكان، تمت مراجعة المنشورات الطبية حول الأمراض الجسدية ذات الإمراضية المرافقة للفصام وذلك لتوفير أساس لبدء العمل الوقائي في هذا الموضوع.

طريقة الدراسة: تم البحث عبر MEDLINE (من عام 1966 وحتى شهر أيار من عام 2006) بمشاركة مصطلح الفصام تبعاً لمختصر العناوين الرئيسية للمواضيع الطبية MeSH مع 23 مصطلحاً من الأمراض الجسدية العامة لتحديد الدراسات الوبائية الموافقة.

النتائج: تم مسح 44202 من الملخصات البحثية. لوحظ أن لدى مرضى الفصام معدلات انتشار أعلى لانتانات فيروس عوز المناعة البشري HIV والتهابات الكبد، هشاشة العظام، تغير في الحساسية للألم، قصور الوظيفة الجنسية، الاختلاطات التوليدية، الآفات القلبية الوعائية، السكري، زيادة

الوزن، المشاكل السنية، والعطاش Polydipsia مقارنةً ببقية الأشخاص الطبيعيين، في حين لوحظ توارد أقل للسرطان والتهاب المفاصل الرثياني عند مرضى الفصام. لقد تمت نسبة 86% من الدراسات في البلدان الصناعية وهو ما يحد من صحة تعميم هذه الموجودات.

الاستنتاجات: إن زيادة توارد بعض الأمراض الجسدية لدى مرضى الفصام قد تعزى إلى عوامل لها علاقة بالفصام كمرض أو بمعالجته، إلا أنها -وبدون شك- تنتج أيضاً عن التنظيم غير المرضي للخدمات الصحية، مواقف الأطباء من هؤلاء المرضى، والوصمة الاجتماعية السلبية المنسوبة إليهم.

Suicide in Deaf Populations: A Literature Review
الانتحار عند مرضى الصمم: مراجعة في المنشورات الطبية

Turner O, et al.
PubMed Ann Gen Psychiatry 2007 Oct 8;6:26.

Background: Studies have found that deaf individuals have higher rates of psychiatric disorder than those who are hearing, while at the same time encountering difficulties in accessing mental health services. These factors might increase the risk of suicide. However, the burden of suicidal behaviour in deaf people is currently unknown.The aim of the present review was to provide a summary of literature on suicidal behaviour with specific reference to deaf individuals. The objectives of the review were to establish the incidence and prevalence of suicidal behaviour in deaf populations; describe risk factors for suicidal behaviour in deaf populations; describe approaches to intervention and suicide prevention that have been used in deaf populations.

Methods: A number of electronic databases (e.g. Medline, PsycINFO, CINAHL, EMBASE, Dissertation Abstracts International, Web of Science, ComDisDome, ASSIA, Education Sage Full Text, Google Scholar, and the grey literature databases FADE and SIGLE) were explored using a combination of key words and medical subject headings as search terms. Reference lists of papers were also searched. The Science and Social Sciences Citation Index electronic databases were used to identify studies that had cited key papers. We also contacted experts and organisations with an interest in the field.

Results: Very few studies focussed specifically on suicide in deaf populations. Those studies that were included (n = 13) generally involved small and unrepresentative samples. There were limited data on the rate of suicidal behaviour in deaf people. One study reported evidence of hearing impairment in 0.2% of all suicide deaths. Another found that individuals with tinnitus seen in specialist clinics had an elevated rate of suicide compared to the general population. The rates of attempted suicide in deaf school and college students during the previous year ranged from 1.7% to 18%, with lifetime rates as high as 30%. Little evidence was found to suggest that risk factors for suicide in deaf people differed systematically from those in the general population. However, studies did report higher levels of depression and higher levels of perceived risk among deaf individuals than hearing control groups. No firm evidence was found regarding the effectiveness of suicide prevention strategies in deaf people, but suggested strategies include developing specific screening tools, training clinical staff, promoting deaf awareness, increasing the availability of specialist mental health services for deaf people.

Conclusion: There is a significant gap in our understanding of suicide in deaf populations. Clinicians should be aware of the possible association between suicide and deafness. Specialist mental health services should be readily accessible to deaf individuals and specific preventative strategies may be of benefit. However, further research using a variety of study designs is needed to increase our understanding of this issue.

خلفية الدراسة: بينت الدراسات أن مرضى الصمم لديهم معدلات أعلى للإصابة بالإضطرابات النفسية مقارنة بالأشخاص الطبيعيين، كما أنهم يواجهون من جهة أخرى صعوبات في الحصول على المساعدة في مجال الصحة النفسية. تؤدي هذه العوامل إلى زيادة خطر الإقدام على الانتحار ضمن هذه المجموعة. إلا أنه من غير المعروف عبء السلوك الانتحاري لدى الشخص الأصم. يهدف هذا العرض التقديمي إلى توفير ملخص حول السلوك الانتحاري مع الإشارة بشكل خاص إلى مرضى الصمم. تحديد معدل الحدوث ومعدل انتشار السلوك الانتحاري لدى مرضى الصمم، وصف عوامل الخطورة للسلوك الانتحاري عند الصم، ووصف طرق المقاربة المعتمدة للتدخل ومنع حدوث الانتحار عند مرضى الصمم.

طريقة الدراسة: تم البحث عبر مجموعة من البيانات الالكترونية (مثال: Medline, PsycINFO, CINAHL, EMBASE، ملخصات المقالات الطبية الدولية المطولة، شبكة المعارف، ComDisDome، ASSIA، النصوص التدريسية الكاملة، Google-Scholar، وقاعدة

بيانات FADE وSIGLE) وذلك باستخدام مجموعة من الكلمات الأساسية والعناوين الطبية ككلمات بحث. كما تم البحث في قوائم الأوراق المرجعية وقاعدة البيانات الالكترونية لفهرس العلوم والعلوم الاجتماعية لتحديد الدراسات الحاوية على أوراق أساسية تم الاستشهاد بها، أخيراً تم الاتصال بالمؤسسات والخبراء المهتمين بالموضوع.

النتائج: لوحظ ضآلة عدد الدراسات التي ركزت بشكل خاص على موضوع الانتحار عند الصم، كما أن العينات في هذه الدراسات (13 دراسة) هي عينات صغيرة غير نموذجية، كما أن هذه الدراسات تضمنت معلومات محدودة حول معدلات الانتحار عند الصم، في حين أوردت دراسة واحدة منها فقط دلائل على وجود نقص سمع عند 0.2% من مجمل وفيات الانتحار، بينما أظهرت دراسة أخرى وجود معدلات انتحار مرتفعة عند الأشخاص الذين يعانون من طنين Tinnitus والذين يراجعون العيادات التخصصية لهذه الشكوى وذلك بالمقارنة مع الأشخاص الطبيعيين. إن معدلات محاولة الانتحار في مدارس الصم وطلاب الجامعات خلال العام الماضي تراوحت بين 1.7% و18%، مع معدلات بقاء على قيد الحياة 30%. لوحظت أدلة ضعيفة على وجود اختلاف جوهري في عوامل الخطورة للانتحار بين الصم من جهة والأشخاص الطبيعيين من جهة أخرى، كما أن الدراسات لم تورد مستويات أعلى للإكتئاب أو لعوامل الخطورة بين الصم مقارنة بمجموعات الشاهد ذات السمع الطبيعي. لم تلاحظ دلائل مثبتة على وجود فعالية لطرائق الوقاية من الانتحار عند الصمّ، إلا أن الدراسات اقترحت بعض الطرائق مثل تطوير وسائل مسحية نوعية، فرق عمل سريرية مدربة، تعزيز الوعي عند الصم، وزيادة توفير الخدمات في مجال الصحة النفسية للصم.

الاستنتاجات: يلاحظ وجود فجوة كبيرة في فهمنا لموضوع الانتحار عند مرضى الصمم، ولهذا يجب أن يدرك السريريون الترافق المحتمل بين الانتحار والصمم. من جهة أخرى يجب تأمين سهولة حصول مرضى الصمم على العناية الصحية النفسية من قبل مختصين، واعتماد بعض الوسائل الوقائية النوعية التي قد تعطي بعض الفائدة. أخيراً مازلنا بحاجة للمزيد من البحث باستخدام أنماط مختلفة من الدراسات وذلك لتوسيع فهمنا لطبيعة هذه الحالة عند مرضى الصمم.

Immunologic & Allergic Diseases
أمراض المناعة والتحسس

Advanced Glycation and Lipoxidation End Products-Amplifiers of Inflammation: the Role of Food
النواتج النهائية لعمليات الكلوزة وأكسدة الشحوم المتقدمة- مضخمات الالتهاب: دور الطعام

Bengmark S.
PubMed 2007 Sep-Oct 31(5):460-40.

Background: High levels of glycated and lipoxidated proteins and peptides in the body are repeatedly associated with chronic diseases. These molecules are strongly associated with activation of a specific receptor called RAGE and a long-lasting exaggerated level of inflammation in the body.

Methods: PubMed reports over 5000 papers plus >13,500 articles about the related HbA(1c), most of them published in the past 5 years. Most of the available abstracts have been read and approximately 800 full papers have been studied.

Results: RAGE, a member of the immunoglobulin superfamily of cell surface molecules and receptor for advanced glycation end products, known since 1992, functions as a master switch, induces sustained activation of nuclear factor kappaB (NfkappaB), suppresses a series of endogenous autoregulatory functions, and converts long-lasting proinflammatory signals into sustained cellular dysfunction and disease. Its activation is associated with high levels of dysfunctioning proteins in body fluids and tissues, and is strongly associated with a series of diseases from allergy and Alzheimers to rheumatoid arthritis and urogenital disorders. Heat treatment, irradiation, and ionization of foods increase the content of dysfunctioning molecules.

Conclusion: More than half of the studies are performed in diabetes and chronic renal diseases; there are few studies in other diseases. Most of our knowledge is based on animal studies and in vitro studies. These effects are worth further exploration both experimentally and clinically. An avoidance of foods rich in deranged proteins and peptides, and the consumption of antioxidants, especially polyphenols, seem to counteract such a development.

خلفية الدراسة: تلاحظ مستويات مرتفعة من البروتينات والببتيدات المكلوزة والمؤكسدة شحمياً في الجسم بشكل مرافق للعديد من الأمراض المزمنة. يترافق وجود هذه المركبات بشكل وثيق مع تفعيل مستقبل نوعي يُدعى RAGE، مع تطور حالة التهابية شديدة طويلة الأمد في الجسم.

طريقة الدراسة: لقد أورد موقع Pubmed أكثر من 5000 ورقة عمل وأكثر من 135000 مقالة حـــول الخضاب السكري HbA(1c)، معظم هذه المقالات نُشرت خلال السنوات الخمس الماضية. تمت قراءة معظم خلاصات الدراسات المتوافرة، ودراسة 800 ورقة عمل كاملة تقريباً.

النتائج: يعمل الـ RAGE – وهو أحد عناصر عائلة الغلوبيولينات المناعية المتواجدة على سطح الخلية، كما أنه مستقبل للنواتج النهائية لعملية الكلوزة اكتشف عام 1992– كقاطعة رئيسية، حيث أنه يحرض على التفعيل المستمر للعامل النووي كابا B (NfkappaB)، كما أنه يثبط سلسلة من الوظائف المنظمة الذاتية داخلية المنشأ، ويقوم بتحويل إشارات طليعة الالتهاب المديدة إلى خلل في الوظيفة الخلوية وتطور المرض. يترافق تفعيل هذا العنصر مع مستويات مرتفعة من البروتينات مختلة الوظيفة ضمن سوائل وأنسجة الجسم، كما أنه يترافق مع سلسلة من الأمراض تتراوح من فرط التحسس (الأرجية) وداء الزهايمر، وحتى التهاب المفاصل الرثياني والاضطرابات البولية التناسلية. إن معاملة الأطعمة بالحرارة أو خضوعها لعمليات تشعيع أو تأيين (فصل الشوارد) يزيد من محتواها من جزيئات الخلل الوظيفي.

الاستنتاجات: لقد أجريت أكثر من نصف الدراسات الملاحظة على مرضى السكري والقصور الكلوي المزمن، ولا توجد سوى دراسات قليلة حول الأمراض الأخرى، كما أن معظم المعلومات والمعارف المتوافرة لدينا حالياً معتمدة على الدراسات الحيوانية والدراسات في الزجاج. إن التأثيرات الملاحظة أعلاه تستحق المزيد من الدراسة والتمحيص من الناحية التجريبية والسريرية، إلا أن تجنب الأطعمة الغنية بالبروتينات والببتيدات المختلة الوظيفة، وتناول مضادات الأكسدة وخاصة الفينولات المتعددة Polyphenols يبدو أنه يحول دون حدوث تطور كهذا.

Anaesthesia
انعاش وتخدير

Intraosseous Drug Administration in Children and Adults During Cardiopulmonary Resuscitation
إعطاء الأدوية داخل العظم لدى الأطفال والبالغين خلال عملية الإنعاش القلبي الرئوي

Buck ML, et al.
PubMed Ann Pharmacother 2007 Oct; 41(10):1679-86.

Objective: To review and assess the available literature on the use of intraosseous (IO) drug administration during cardiopulmonary resuscitation, addressing the benefits and risks of using this method of drug delivery in children and adults.

Data Sources: The MEDLINE (1950-July 2007) database was searched for pertinent abstracts, using the key term intraosseous infusions. Additional references were obtained from the bibliographies of the articles reviewed. Manufacturer Web sites were used to obtain information about IO insertion devices.

Study Selection And Data Extraction: All available English-language clinical trials, retrospective studies, and review articles describing IO drug administration were reviewed. Studies conducted in animal models to evaluate the effectiveness and safety of IO drug administration were also included.

Data Synthesis: IO access uses the highly vascularized bone marrow to deliver fluids and medications during cardiopulmonary resuscitation. This route, developed in the 1940s, has been revived in the past decade as a means of achieving rapid vascular access when intravenous access cannot be obtained. The primary advantage of IO access is the high success rate (approximately 80%). Most trained providers can place an IO line within 1-2 minutes. A number of small-scale studies and retrospective reviews have established the usefulness of this route for the delivery of many commonly used resuscitation drugs. In addition, animal models have demonstrated rapid drug delivery to the systemic circulation. While all resuscitation drugs can be given by the IO route, administration of ceftriaxone, chloramphenicol, phenytoin, tobramycin, and vancomycin may result in lower peak serum concentrations. The most common adverse effect seen with IO use, extravasation, has been reported in 12% of patients. Compartment syndrome, osteomyelitis, and tibial fracture are rare, but have also been reported.

Conclusion: IO administration is a safe and effective method for delivering drugs during cardiopulmonary resuscitation. It should be considered whenever intravenous access cannot be rapidly obtained.

هدف الدراسة: تهدف هذه الدراسة إلى مراجعة وتقييم ما نشر عن إعطاء الأدوية داخل العظم (IO) خلال الإنعاش القلبي الرئوي، وتحديد فوائد ومخاطر استخدام هذه الطريقة في الإعطاء لدى الأطفال والبالغين.

مصدر المعلومات: تم البحث في قاعدة بيانات MEDLINE (من عام 1950 وحتى تموز 2007) للحصول على الملخصات البحثية ذات الصلة بالموضوع باستخدام كلمة البحث (تسريب داخل العظم)، كما تم الحصول على العديد من المراجع الإضافية المعتمدة في المقالات التي تم الإطلاع عليها خلال الدراسة. كما استُخدمت المواقع الالكترونية للصانعين على الشبكة العالمية لاستخلاص معلومات حول الوسائل المستخدمة في الإعطاء داخل العظم.

اختيار الدراسات واستخلاص البيانات: تمت مراجعة جميع التجارب السريرية الموجودة باللغة الإنكليزية، بالإضافة إلى الدراسات الإستعادية Retrospective، ومقالات المراجعة التي تصف عملية إعطاء الأدوية داخل العظم. كما شملت المراجعة أيضاً حصيلة الدراسات التي أجريت على نماذج حيوانية لتقييم فعالية وسلامة هذه الطريقة في الإعطاء الدوائي.

تجميع البيانات: يعتمد الإعطاء داخل العظم على استخدام نقي العظم ذو التوعية الغزيرة لإعطاء السوائل والأدوية خلال الإنعاش القلبي الرئوي، وقد عادت هذه الطريقة في الإعطاء - والتي تم تطويرها في الأربعينات - للازدهار من جديد في العقد الأخير كوسيلة للوصول لمدخل وعائي سريع عندما لا يكون بالمستطاع الدخول ضمن الوريد. إن الفائدة الرئيسية من الإعطاء داخل العظم هي نسبة النجاح الكبيرة (حوالي 80%)، كما يمكن لمعظم المتدربين إنجاز الوصول لداخل العظم خلال 1–2 دقيقة. وقد بينت عدة من الدراسات التي تعتمد على مقياس صغير والدراسات الإستعادية فائدة هذا التوجه من أجل إعطاء العديد من أدوية الإنعاش شائعة الاستخدام، بالإضافة لما سبق فقد أظهرت النماذج الحيوانية بوضوح سرعة وصول الدواء إلى الدوران الجهازي. وعلى الرغم من إمكانية إعطاء جميع أدوية الإنعاش داخل العظم، إلا أن إعطاء أدوية Ceftriaxone، chloramphenicol، phenytion، tobramycin وvancomycin قد يؤدي إلى قيم أخفض في التراكيز المصلية العظمى.

لقد لوحظ التسرب خارج الأوعية extravasation –وهو التأثير الضار الأكثر شيوعاً للإعطاء داخل العظم– عند 12% من المرضى، كما سُجلت أيضاً تأثيرات أخرى نادرة الحدوث مثل متلازمة الحيز Compartment syndrome، ذات العظم والنقي، الكسور الظنبوبية.

الاستنتاجات: تُعتبر عملية إعطاء الأدوية داخل العظم طريقة آمنة وفعالة لإعطاء الأدوية خلال عملية الإنعاش القلبي الرئوي، ولهذا يجب التفكير بها كلما كان من غير الممكن الوصول لطريق وريدي بالسرعة المطلوبة.

Saline or Albumin for Fluid Resuscitation in Patients With Traumatic Brain Injury

استخدام المصل الملحي بدل الألبومين في إنعاش السوائل عند مرضى أذيات الدماغ الرضية

The Safe Study Investigators
NEJM 2007 AUG 30;357(9):874-884.

Background: The Saline versus Albumin Fluid Evaluation study suggested that patients with traumatic brain injury resuscitated with albumin had a higher mortality rate than those resuscitated with saline. We conducted a post hoc follow-up study of patients with traumatic brain injury who were enrolled in the study.

Methods: For patients with traumatic brain injury (i.e., a history of trauma, evidence of head trauma on a computed tomographic [CT] scan, and a score of ≤13 on the Glasgow Coma Scale [GCS]), we recorded baseline characteristics from case-report forms, clinical records, and CT scans and determined vital status and functional neurologic outcomes 24 months after randomization.

Results: We followed 460 patients, of whom 231 (50.2%) received albumin and 229 (49.8%) received saline. The subgroup of patients with GCS scores of 3 to 8 were classified as having severe brain injury (160 [69.3%] in the albumin group and 158 [69.0%] in the saline group). Demographic characteristics and indexes of severity of brain injury were similar at baseline. At 24 months, 71 of 214 patients in the albumin group (33.2%) had died, as compared with 42 of 206 in the saline group (20.4%) (relative risk, 1.63; 95% confidence interval [CI], 1.17 to 2.26; P=0.003). Among patients with severe brain injury, 61 of 146 patients in the albumin group (41.8%) died, as compared with 32 of 144 in the saline group (22.2%) (relative risk, 1.88; 95% CI, 1.31 to 2.70; P<0.001); among

patients with GCS scores of 9 to 12, death occurred in 8 of 50 patients in the albumin group (16.0%) and 8 of 37 in the saline group (21.6%) (relative risk, 0.74; 95% CI, 0.31 to 1.79; P=0.50).
Conclusion: In this post hoc study of critically ill patients with traumatic brain injury, fluid resuscitation with albumin was associated with higher mortality rates than was resuscitation with saline.

خلفية الدراسة: أظهرت الدراسات المجراة للمقارنة بين استخدام المصل الملحي واستخدام الألبومين أن إنعاش مرضى أذيات الدماغ الرضية بالألبومين ترافق مع معدل وفيات أعلى مقارنة بإنعاشهم باستخدام المصل الملحي. تم إجراء دراسة متابعة لمرضى الأذيات الدماغية الملحقين بالدراسة.

طريقة الدراسة: تمت متابعة مرضى مصابين بأذيات دماغية رضية (أي وجود قصة رض أو دلائل على رضوض على الرأس بالتصوير الطبقي المحوري CT scan، ومعدل نقاط أقل أو يساوي 13 وفقاً لمقياس غلاسكو لتقييم حالة السبات Glasgow Coma Scale). تم تسجيل المميزات القاعدية لكل حالة من استمارة الحالة السريرية ونتائج التصوير الطبقي المحوري، كما تم تحديد الحالة الحيوية والنتائج العصبية الوظيفية بعد 24 شهراً من الاختيار العشوائي للعينة.

النتائج: تمت متابعة 460 مريضاً من مرضى الأذيات الدماغية الرضية، استخدم الألبومين لدى 231 منهم (بنسبة 50.2%)، بينما استخدم المصل الملحي عند 229 آخرين (بنسبة 49.8%). تم تصنيف مجموعة فرعية من المرضى (الذين لديهم مجموع نقاط بين 3–8 على مقياس غلاسكو) بكونهم يعانون من أذيات دماغية شديدة (وهم 160 مريضاً في مجموعة الألبومين (69.3%) و158 مريضاً في مجموعة المصل الملحي (69.0%)). إن الخصائص السكانية ومشعرات شدة الأذية الدماغية كانت متشابهة عند البدء بالدراسة. لوحظ بعد 24 شهراً من المتابعة أن 71 مريضاً من أصل 214 ضمن مجموعة الألبومين (أي 33.2%) قد توفوا، مقارنة بـــ42 مريضاً من أصل 206 في مجموعة المصل الملحي (نسبة 20.4%) (الخطر النسبي 1.63، بفواصل ثقة [CI]=95%، 1.17 إلى 2.26، P=0.003). أما في مجموعة مرضى الأذيات الدماغية الشديدة، فإن 61 من أصل 146 مريضاً في مجموعة الألبومين (نسبة 41.8%) قد توفوا مقارنة بـ 32 مريضاً من أصل 144 في مجموعة المصل الملحي (نسبة 22.2%) (الخطر النسبي 1.88، بفواصل ثقة [CI]=95%، 1.31 إلى 2.70، P>0.001). أما عند المرضى الذين لديهم مجموع نقاط بين 9–12 فإن الوفاة حدثت عند 8 من 50 مريضاً في مجموعة الألبومين (16.0%)، بينما حدثت عند 8 من 37 مريضاً في مجمعة المصل الملحي (21.6%)، (الخطر النسبي 0.74، بفواصل ثقة [CI]=95%، 0.31 إلى 1.79، P=0.50).
الخلاصة: تبين من خلال هذه الدراسة أن استخدام الألبومين في إنعاش السوائل عند مرضى أذيات الدماغ الرضية ترافق مع معدل وفيات أعلى مقارنة باستخدام المصل الملحي.

ENT
أمراض الأذن والأنف والحنجرة

Therapeutic Options for Reducing Sleep Impairment in Allergic Rhinitis, Rhinosinusitis, and Nasal Polyposis
الخيارات العلاجية المتوافرة للحد من اضطرابات النوم لدى مرضى التهاب الأنف الأرجي، التهاب الأنف والجيوب، وداء السليلات الأنفية

Storms W, et al.
PubMed Curr Med Res Opin. 2007 Sep; 23(9):2135-46.

Background: Patients with inflammatory disorders of the upper airways, such as allergic rhinitis, rhinosinusitis, and nasal polyposis, often have significant sleep disturbances. Poor sleep can lead to fatigue, daytime somnolence, impaired daytime functioning as reflected in lower levels of productivity at work or school, and a reduced quality of life. Although the exact mechanisms by which these inflammatory nasal conditions disturb sleep is not fully understood, congestion appears to be a key factor and is generally the most common and bothersome symptom for patients with these conditions. Successful therapy should improve patients' sleep and well-being without introducing any negative effects on sleep.
Scope Of Literature Search: Literature searches of Medline, Embase, and abstracts from medical/scientific conferences were conducted for the period of 1995 through mid-2006 for primary and review articles and

conference presentations about sleep disturbance related to allergic rhinitis, rhinosinusitis, and nasal polyposis. These searches also sought to identify articles examining how treatments for those diseases improved sleep and, consequently, patients' quality of life. Surveys of the impact of congestion on patients' quality of life and their sleep also were consulted. Clinical studies were selected for discussion if they were randomized, double-blind, and placebo-controlled. Limitations of this review include the absence of any direct comparisons of the effectiveness of different drugs on improving sleep and shortcomings in the statistical methods of the patient surveys.
Findings: Intranasal corticosteroids (INSs) are the most effective medication for reducing congestion in patients with inflammatory nasal conditions. There is a growing amount of evidence that a reduction in congestion with INSs is associated with improved sleep, reduced daytime sleepiness, and enhanced patient quality of life.
Conclusion: Relief of sleep impairment associated with inflammatory disorders of the nose and sinuses can be addressed with INS therapy.

خلفية الدراسة: يعاني غالبية مرضى الآفات الالتهابية في الطرق التنفسية العلوية مثل التهاب الأنف الأرجي، التهاب الأنف والجيوب، وداء السليلات الأنفية من اضطرابات كبيرة في النوم. تقود هذه الاضطرابات إلى تعب، وسن، وخلل في أداء الوظائف اليومية الاعتيادية يؤدي بدوره إلى انخفاض في الإنتاجية في العمل والمدرسة ويسيء إلى نوعية الحياة لدى المريض. وعلى الرغم أن الآلية الدقيقة المسببة لاضطرابات النوم عند مرضى الآفات الالتهابية الأنفية غير مفهومة بشكل كامل بعد، إلا أن الاحتقان يبدو أنه العامل الأساسي في ذلك، علاوةً عن كونه العرض الأشيع والأكثر إزعاجاً للمريض في مثل هذه الحالات. يجب في المعالجة الناجحة لهذه الحالات أن تحسن النوم والحالة العامة عند المريض دون التسبب بأية تأثيرات سلبية على موضوع النوم.

مجال البحث: تم البحث في المنشورات الطبية Medline, Embase وملخصات أعمال المؤتمرات العلمية الطبية من عام 1995 وحتى منتصف عام 2006 للمقالات الأولية والمراجعات والعروض التقديمية حول اضطرابات النوم المتعلقة بالتهاب الأنف الأرجي، التهاب الأنف والجيوب، وداء السليلات الأنفية. كما تم التركيز في عملية البحث على المقالات التي تدرس كيف تحسن معالجات هذه الأمراض حالة النوم ونوعية الحياة لدى المريض. تم اختيار الدراسات السريرية لمناقشة كونها عشوائية، مزدوجة التعمية، ومضبوطة بمعالجة إرضائية. تتمثل محدودية هذه المراجعة في غياب وجود مقارنات مباشرة بين فعالية الأدوية المختلفة في تحسين النوم، مع وجود نقاط ضعف في الطرق الإحصائية المعتمدة في هذه الدراسات المسحية.

النتائج: تعتبر الستيروئيدات القشرية المعطاة داخل الأنف INS المعالجة الأكثر فعالية في التقليل من الاحتقان عند مرضى الآفات الالتهابية في الأنف، كما توجد دلائل متزايدة على أن تخفيف الاحتقان باستخدام هذه الأدوية يترافق مع تحسن في النوم عند هؤلاء المرضى، مع الحد من حالة النعاس خلال اليوم وتحسن نوعية الحياة لدى المريض.

الاستنتاجات: يمكن تحقيق تحسن في حالة الخلل في النوم عند مرضى الاضطرابات الالتهابية في الأنف والجيوب من خلال استخدام الستيروئيدات القشرية داخل الأنف.

Genetics
علم الوراثة

Risk Alleles for Multiple Sclerosis Identified by a Genomwide Study
الأليلات الخطرة للإصابة بالتصلب العديد المعزولة من خلال الدراسات الشاملة للمادة الوراثية

The International Multiple Sclerosis Genetics Consortium
NEJM 2007 Aug 30;357(9):851-862.

Background: Multiple sclerosis has a clinically significant heritable component. We conducted a genomewide association study to identify alleles associated with the risk of multiple sclerosis.
Methods: We used DNA microarray technology to identify common DNA sequence variants in 931 family trios (consisting of an affected child and both parents) and tested them for association. For replication, we genotyped another 609 family trios, 2322 case subjects, and 789 control subjects and used genotyping data from two external control data sets. A joint analysis of data from 12,360 subjects was performed to estimate the overall significance and effect size of associations between alleles and the risk of multiple sclerosis.

Results: A transmission disequilibrium test of 334,923 single-nucleotide polymorphisms (SNPs) in 931 family trios revealed 49 SNPs having an association with multiple sclerosis ($P<1x10^{-4}$); of these SNPs, 38 were selected for the second-stage analysis. A comparison between the 931 case subjects from the family trios and 2431 control subjects identified an additional nonoverlapping 32 SNPs (P<0.001). An additional 40 SNPs with less stringent P values (<0.01) were also selected, for a total of 110 SNPs for the second-stage analysis. Of these SNPs, two within the interleukin-2 receptor αgene (*IL2RA*) were strongly associated with multiple sclerosis ($P=2.96x10^{-8}$), as were a nonsynonymous SNP in the interleukin-7 receptor αgene (*IL7RA*) ($P=2.94x10^{-7}$) and multiple SNPs in the HLA-DRA locus ($P=8.94x10^{-81}$).

Conclusion: Alleles of *IL2RA* and *IL7RA* and those in the HLA locus are identified as heritable risk factors for multiple sclerosis.

خلفية الدراسة: يتميز التصلب العديد بوجود مكون وراثي هام سريرياً. تمت مواكبة الدراسات الشاملة على المادة الوراثية لتحديد الأليلات المترافقة مع زيادة خطورة الإصابة بالتصلب العديد.

طريقة الدراسة: تم استخدام تقنية مصفوفات DNA الدقيقة (DNA microarray) لتحديد التبدلات الشائعة في تسلسل متتاليات DNA عند 931 من الثلاثيات العائلية (المكونة من الطفل المصاب وكل من الأبوين) ودراسة ترافقها مع الداء. ولتكرار التجربة فقد تم تحديد النمط الوراثي عند 609 ثلاثية عائلية أخرى مع 2322 من حالات التصلب العديد و789 حالة شاهد، كما تم استخدام معطيات التنميط الوراثي لمجموعتين من الشواهد خارج الدراسة. تم إجراء تحليل شامل لمجمل المعطيات المأخوذة من 12360 حالة لتقييم أهمية ومدى تأثير الترافق بين أليلات معينة وخطورة حدوث التصلب العديد.

النتائج: أظهر اختبار الانتقال غير المتوازن(transmission disequilibrium test) لـ334923 من التعدديات الشكلية مفردة النكليوتيد (single nucleotide polymorphism) SNPs عند 931 من الثلاثيات العائلية أن 49 من هذه التعدديات SNPs تترافق مع التصلب العديد ($P<1x10^{-4}$)، تم اختيار 38 من بين هذه التعدديات الشكلية للمرحلة الثانية من التحليل. قادت مقارنة حالات الإصابة في الثلاثيات العائلية (931 ثلاثية) مع حالات الشاهد (2431 حالة) إلى تحديد 32 تعددية شكلية جديـدة أخرى ($P<0.001$). كما تم اختيار 40 تعددية شكلية SNPs أخرى بقيمة P أقل إقناعاً ($P<0.01$)، ليصبح المجموع 110 تعددية شكلية ستدرس في المرحلة الثانية من التحليل. ومن ضمن هذه التعدديات الشكلية المفردة النكليوتيد SNPs، فإن اثنتين منها ضمن المورثة ألفا لمستقبل الإنترلوكين-2 (IL2RA) أظهرتا ترافقاً وثيقاً مع التصلب العديد ($P=2.96\times10^{-8}$)، كما لوحظ أيضاً ترافق وثيق مع التصلب العديد بين تعددية شكلية SNPs في المورثة ألفا لمستقبل الإنترلوكين-7(IL7RA) بقيمة ($P=2.94\times10^{-7}$)، وتعددية شكلية في موقع HLA-DRA ($P=8.94\times10^{-81}$).

الاستنتاجات: تم تحديد الأليلات *IL2RA* و*IL7RA* والأليلات في موقع HLA بكونها عوامل خطورة موروثة للإصابة بالتصلب العديد.

A Polymorphism in the *CTGF* Promoter Region Associated With Systemic Sclerosis
التعددية الشكلية في منطقة محرض CTGF المترافقة مع التصلب الجهازي

Fonseca C, et al.
NEJM 2007 Sep 20;357(12):1210-1220.

Background: Systemic sclerosis (scleroderma) is a life-threatening autoimmune disease that is characterized by the presence of specific autoantibodies and fibrosis of the skin and major internal organs.

Methods: We genotyped a polymorphism (G 945C) in the promoter of the connective-tissue growth factor (*CTGF*) gene in 1000 subjects in two groups: group 1, consisting of 200 patients with systemic sclerosis and 188 control subjects; and group 2, consisting of 300 patients with systemic sclerosis and 312 control subjects. The combined groups represented an estimated 10% of patients with systemic sclerosis in the United Kingdom. We tested the effect of the polymorphism on the transcription of *CTGF*.

Results: The GG genotype was significantly more common in patients with systemic sclerosis than in control subjects in both groups, with an odds ratio for the combined group of 2.2 (95% confidence interval [CI], 1.5 to 3.2; P<0.001 for trend). Analysis of the combined group of patients with systemic sclerosis showed a significant association between homozygosity for the G allele and the presence of anti topoisomerase I antibodies (odds ratio, 3.3; 95% CI, 2.0 to 5.6; P<0.001) and fibrosing alveolitis (odds ratio, 3.1; 95% CI, 1.9 to 5.0; P<0.001). We observed that the substitution of cytosine for guanine created a binding site of the transcriptional regulators Sp1 and

Sp3. The C allele has high affinity for Sp3 and is associated with severely reduced transcriptional activity. A chromatin immunoprecipitation assay showed a marked shift in the ratio of Sp1 to Sp3 binding at this region, demonstrating functional relevance in vivo.
Conclusion: The G 945C substitution represses *CTGF* transcription, and the 945G allele is significantly associated with susceptibility to systemic sclerosis.

خلفية الدراسة: يعتبر التصلب الجهازي (أو صلابة الجلد scleroderma) من الأمراض المناعية الذاتية المهددة للحياة، والذي يتميز بوجود أضداد ذاتية نوعية مع حدوث تليف في الجلد والأعضاء الداخلية الرئيسية.
طريقة الدراسة: تم تحديد النمط الوراثي للتعددية الشكلية (G-945C) في محرض مورثة عامل نمو النسيج الضام CTGF عند 1000 شخص شكلوا مجموعتين: الأولى تتكون من 200 مصاب بالتصلب الجهازي و188 حالة شاهد، أما المجموعة الثانية فتتكون من 300 مصاب بالتصلب الجهازي و312 حالة شاهد. يمثل المرضى في مجمل هاتين المجموعتين نسبة 10% من حالات التصلب الجهازي في المملكة المتحدة. تمت دراسة تأثير التعددية الشكلية على انتساخ CTGF.
النتائج: لوحظ أن توارد النمط الوراثي GG أكثر شيوعاً عند مرضى التصلب الجهازي بالمقارنة مع مجموعة الشاهد في كلتا المجموعتين بنسبة أرجحية OR= 2.2 عند مجمل المجموعتين (بفواصل ثقة [CI]=95%، 1.5 إلى 3.2، P<0.001). إن دراسة مجموعة مرضى التصلب الجهازي في مجمل المجموعتين أظهرت وبوضوح ترافق بين النمط متماثل اللواقح للأليل G ووجود أضداد Anti-topoisomerase I (بنسبة أرجحية OR=3.3، بفواصل ثقة [CI]=95%، 2.0 إلى 5.6، P<0.001)، وحدوث التهاب الأسناخ الرئوية المليف (بنسبة أرجحية OR=3.1، بفواصل ثقة [CI]=95%، 1.9 إلى 5.0، P<0.001). كما لوحظ أن استبدال السيتوزين بالغوانين يؤدي إلى تشكل موقع ارتباط لعوامل تنظيم الانتساخ SP1 وSP3. يتميز الأليل C بإلفته العالية للعامل SP3، كما أنه يترافق مع تناقص شديد في فعالية الانتساخ. أظهرت مقايسة الترسيب المناعي للكروماتين تغير واضح في نسبة SP1 إلى SP3 المرتبطين عند هذه المنطقة.
الاستنتاجات: يؤدي الاستبدال G-945C إلى تثبيط عملية انتساخ CTGF وتشكل الأليل 945G الذي يترافق بشكل وثيق مع قابلية الإصابة بالتصلب الجهازي.

Future Researches
أبحاث مستقبلية

Tissue Engineering for the Lower Urinary Tract: A Review of a State of the Art Approach
الهندسة النسيجية للسبيل البولي السفلي: مراجعة حول طرق المقاربات الموجودة

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Objectives: Tissue engineering (TE) has become synonymous with physiological and functional reconstructive approaches in medicine. Although the goals of TE are ambitious and have not yet been attained, significant milestones have been achieved and future possibilities are great. To examine these possibilities with a special emphasis on the lower urinary tract, we provide a review of the development of TE techniques and a high-level overview of related regulatory and legal issues.
Methods: Current trends in the field of TE, including the use of stem cells, scaffold optimization, and acellular tissue and growth factors, were reviewed and critically assessed through a comprehensive literature review using the PubMed database. Because of the rapid development of new TE approaches, recent abstracts from international urology conventions were included. A review of 2007 European Medicines Agency and Commission for Advanced Therapies legal regulations was also performed.
Results: Although several clinical TE approaches have been developed, most lack objective validation. A variety of TE techniques are currently under development or investigation, but thus far, no one approach is clearly superior on the basis of significant long-term studies. A medical product based on TE and stem cells can be successfully developed only with careful consideration of legal and ethical regulations. *Conclusion:* TE holds the promise for a tremendous impact on reconstructive urology. However, research must be focused and intensified for the full

potential clinical benefits to be made widely available. Because the product development is affected by legal regulations, consensus must be achieved.

هدف الدراسة: لقد أصبح مفهوم الهندسة النسيجية TE مرادفاً للمقاربات الترميمية الفيزيولوجية والوظيفية المطبقة في الحقل الطبي. وعلى الرغم من الأهداف الطموحة للهندسة النسيجية التي لم تتحقق بعد، إلا أنه تم تحقيق قفزات مهمة في هذا المجال مع وجود آفاق تطورية مستقبلية واسعة النطاق. ولاختبار الإمكانيات المستقبلية لهذه التقنية وخاصة على صعيد تطبيقاتها على السبيل البولي السفلي فقد قمنا بمراجعة لتطور تقنيات الهندسة النسيجية مع نظرة شاملة أوسع للمواضيع القانونية والناظمة ذات الصلة بالموضوع.

طريقة الدراسة: تمت مراجعة وتقييم التقنيات المستخدمة ضمن حقل الهندسة النسيجية (استخدام الخلايا الجذعية، انتقاء السقالات الترميمية scaffold، الأنسجة اللاخلوية وعوامل النمو) عبر المنشورات الطبية باستخدام قاعدة بيانات PubMed. وبسبب التطور السريع للتقنيات الجديدة في هذا المجال فقد تم تضمين الملخصات البحثية الحديثة للابتكارات الدولية في طب الجهاز البولي، كما تم إجراء مراجعة لبيانات الوكالة الطبية الأوروبية وهيئة تنظيم المعالجات المتقدمة لعام 2007.

النتائج: على الرغم من تطوير العديد من المقاربات السريرية للهندسة النسيجية، إلا أن معظم هذه المقاربات تنقصها المصداقية. توجد مجموعة متنوعة من التقنيات التي تم تطويرها حالياً في هذا المجال، ولكن لا توجد –حتى الآن– أفضلية مدعومة بدراسات موثقة طويلة الأمد لإحدى المقاربات على الأخرى. يمكن تطوير المنتجات الطبية المعتمدة على الهندسة النسيجية والخلايا الجذعية بنجاح، ولكن مع مراعاة الضوابط القانونية والأخلاقية لهذا الموضوع.

الاستنتاجات: تقدم تقنيات الهندسة النسيجية وعوداً بإحداث تحولات عظيمة في عمليات الترميم البولية، إلا أن يجب تركيز وتعزيز الأبحاث حول الفوائد السريرية الكامنة وراء هذه التقنية لتوسيع توافرها. كما يجب من جهة أخرى الوصول إلى إجماع حول هذه المنتجات بسبب تأثر تطورها بالقواعد الناظمة القانونية.

اسم المركز	عدد المتقدمين	عدد الناجحين	%
اربد	26	12	%46
البحرين	10	5	%50
بغداد	62	42	%67
بيروت	8	1	%12
دبي	17	9	%52
دمشق	88	19	%21
الدوحة	9	3	%33
جدة	42	20	%47
الرياض	69	40	%57
صنعاء	48	15	%31
بنغازي	16	3	%23
طرابلس	76	9	%11
مسقط	16	5	%31
المجموع	487	183	%37

5- الامتحان الكتابي النهائي لاختصاص طب الأطفال:

عقد الامتحان الكتابي النهائي لاختصاص طب الأطفال بتاريخ 29/ 2007/11، وقد تقدم لهذا الامتحان 244 طبيباً، نجح منهم 126 طبيباً، أي أن نسبة النجاح هي 51%. وفيما يلي نسب النجاح.

اسم المركز	عدد المتقدمين	عدد الناجحين	%
اربد	12	6	%50
البحرين	8	5	%62
بغداد	10	6	%60
بيروت	4	1	%25
دبي	9	5	%55
دمشق	66	30	%45
الدوحة	7	6	%85
جدة	34	19	%57
الرياض	40	32	%80
صنعاء	26	12	%46
بنغازي	6	3	%50
طرابلس	22	1	%4
المجموع	244	126	%51

الأنشطة المتوقعة للمجلس العربي للاختصاصات الطبية لعام 2008 م

- 2008/1/1: الامتحان السريري والشفوي لاختصاص الولادة وأمراض النساء (مركز الرياض).
- 2008/1/5: الامتحان الأولي لاخصاص طب الأسرة.
- 2008/1/5: الامتحان السريري لاختصاص طب الأسرة والمجتمع (مركز جدة، دبي).
- 2008/1/20-18: اجتماع لجنة امتحانات لاختصاص الأمراض الجلدية.
- 2008/1/29-27: الامتحان السريري والشفوي لاختصاص طب الأطفال (مركز دمشق).
- 2008/2/17-16: الامتحان السريري والشفوي لاختصاص الولادة وأمراض النساء (مركز دمشق).
- 2008/2/19-17: الامتحان السريري والشفوي لاختصاص طب الأطفال (مركز الرياض).
- 2008/2/21-18: اجتماع لجنة الامتحانات ودراسة الأبحاث لاختصاص الولادة وأمراض النساء.
- 2008/2/28-27: الامتحان السريري والشفوي لاختصاص الجراحة العامة (مركز الرياض).
- 2008/3/19-16: اجتماع لجنة الامتحانات لاختصاص الطب النفسي.
- 2008/3/20: اجتماع اللجنة التنفيذية لاختصاص الطب النفسي.
- 2008/3/21-19: الامتحان السريري والشفوي لاختصاص طب الولادة وأمراض النساء (مركز طرابلس).
- 2008/3/22: اجتماع لجنة الامتحانات لطب العيون وجراحتها.
- 2008/3/24-23: الامتحان السريري والشفوي لاختصاص الولادة وأمراض النساء (مركز صنعاء).
- 2008/4/10-5: اجتماع لجنة الامتحانات لاختصاص الجراحة العامة والجراحة العظمية- الامتحان السريري والشفوي لاختصاص الجراحة العامة والجراحة العظمية.
- 2008/4/6: الامتحان الأولي لاختصاص الولادة وأمراض النساء.
- 2008/4/7: الامتحان الأولي لاختصاص التخدير والعناية المركزة.
- 2008/4/16: الامتحان الأولي لاختصاص طب العيون وجراحتها.
- 2008/4/29-26: الامتحان السريري والشفوي لاختصاص التخدير والعناية المركزة.
- 2008/4/29-26: اجتماع لجنة الامتحانات لاختصاص التخدير والعناية المركزة.
- 2008/4/28-26: الامتحان السريري والشفوي لاختصاص طب الأطفال (مركز طرابلس).
- 2008/5/5-3: الامتحان السريري والشفوي لاختصاص طب الأطفال (مركز صنعاء).

2- الامتحان النهائي الكتابي لاختصاص الجراحة العامة:

عقد الامتحان النهائي الكتابي لاختصاص الجراحة العامة بتاريخ 2007/11/4، في المراكز التالية: دمشق، والرياض، واربد، وصنعاء، وطرابلس، وبنغازي، والدوحة، والمنامة، وبغداد. تقدم لهذا الامتحان 139 طبيباً، نجح منهم 59 طبيباً، أي أن نسبة النجاح هي 42.5%. وفيما يلي نسب النجاح حسب المراكز الامتحانية التالية:

اسم المركز	عدد المتقدمين	عدد الناجحين	%
طرابلس	4	1	%25
بنغازي	3	1	%33
صنعاء	20	8	%40
دمشق	61	22	%36
بغداد	18	12	%67
المنامة	12	6	%50
الرياض	11	6	%55
الدوحة	1	0	0
اربد	9	3	%33
المجموع	139	59	%42.5

3- الامتحان النهائي الكتابي لاختصاص جراحة العظام:

عقد الامتحان النهائي الكتابي لاختصاص جراحة العظام بتاريخ 4/ 2007/11، في كل من المراكز التالية: دمشق، والرياض، واربد، وصنعاء، والدوحة، والمنامة. تقدم لهذا الامتحان 29 طبيباً، نجح منهم 19 طبيباً، أي أن نسبة النجاح هي 66%. وفيما يلي نسب النجاح حسب المراكز الامتحانية التالية:

اسم المركز	عدد المتقدمين	عدد الناجحين	%
صنعاء	10	7	%70
دمشق	7	2	%29
المنامة	2	2	%100
الرياض	2	1	%50
الدوحة	1	1	%100
اربد	7	6	%86
المجموع	29	19	%65.5

4-الامتحان النهائي الكتابي لاختصاص الجراحة البولية:

عقد الامتحان النهائي الكتابي لاختصاص الجراحة البولية بتاريخ 4 /2007/11 في كل من المراكز التالية دمشق، والرياض، واربد، وصنعاء، وبنغازي، والمنامة. تقدم لهذا الامتحان 28 طبيباً، نجح منهم 14 طبيباً، أي أن نسبة إلنجاح هي 50%. وفيما يلي نسب النجاح حسب المراكز الامتحانية التالية:

اسم المركز	عدد المتقدمين	عدد الناجحين	%
بنغازي	3	1	%33
صنعاء	5	4	%80
دمشق	12	4	%33
المنامة	4	2	%50
الرياض	2	2	%100
اربد	2	1	%50
المجموع	28	14	%50

5- الامتحان النهائي الكتابي لاختصاص الجراحة العصبية:

عقد الامتحان النهائي الكتابي لاختصاص الجراحة العصبية بتاريخ 2007/11/4 في كل من المراكز التالية: دمشق، واربد، والدوحة. وقد تقدم لهذا الامتحان 5 أطباء، نجح منهم 3 أطباء، أي أن نسبة النجاح هي 60%. وفيما يلي نسب النجاح حسب المراكز الامتحانية التالية:

اسم المركز	عدد المتقدمين	عدد الناجحين	%
دمشق	3	1	%33
اربد	2	1	%50
الدوحة	1	1	%100
المجموع	6	3	%50

اختصاص طب الأطفال

1- اجتماع لجنة الامتحانات لاختصاص طب الأطفال:

اجتمعت لجنة الاكتحانات والوثائق في الفترة الواقعة بين 16-19/ 2007/10، ووضعت الأسئلة للامتحان الكتابي الأولي بتاريخ 28/ 2007/11، والكتابي النهائي بتاريخ 2007/11/29.

2- اجتماع اللجنة التنفيذية لاختصاص طب الأطفال:

اجتمعت اللجنة التنفيذية للمجلس العلمي لاختصاص طب الأطفال بيتاريخ 2007/10/19.

3- الامتحان السريري والشفوي لاختصاص طب الأطفال:

عقد الامتحان السريري والشفوي في مركز دمشق بتاريخ 16-19/ 2007/10، في ثلاث مستشفيات: مشفى الأطفال-مشفى دمشق- مشفى تشرين العسكري. تقدم لهذا الامتحان 38 طبيباً، نجح منهم 17 طبيباً، أي أن نسبة النجاح هي 44.7%.

4- الامتحان الكتابي الأولي لاختصاص طب الأطفال:

عقد الامتحان الكتابي الأولي لاختصاص طب الأطفال بتاريخ 28/ 2007/11، تقدم لهذا الامتحان 487 طبيباً، نجح منهم 183 طبيباً، أي أن نسبة النجاح هي 62.4%. وفيما يلي نسب النجاح حسب المراكز الامتحانية:

3- الامتحان النهائي الشفوي لاختصاص طب الطوارىء :

عقد الامتحان النهائي الشفوي لاختصاص طب الطوارىء خلال الفترة 4-2007/12/5، في مقر الامانة العامة بدمشق 2007. تقدم تقدم لهذا الامتحان 32 طبيباً، نجح منهم 12 طبيباً، أي أن نسبة النجاح هي 37%. وفيما يلي نسب النجاح.

اسم المركز	عدد المتقدمين	عدد الناجحين	%
البحرين	5	1	%20
صنعاء	3	0	0
قطر	12	4	%33
سلطنة عمان	5	3	%60
السعودية	7	4	%57
المجموع	32	12	%37

اختصاص طب العيون وجراحتها

1- الامتحان الأولي النهائي الكتابي لاختصاص طب العيون وجراحتها:

عقد الامتحان الأولي النهائي الكتابي لاختصاص طب العيون وجراحتها في 2007/10/24 في المراكز التالية: دمشق، وصنعاء، وبغداد، والبحرين.

2- الامتحان النهائي الشفوي والسريري لاختصاص طب العيون وجراحتها:

جرى في دمشق الامتحان النهائي الشفوي والسريري لاختصاص طب العيون وجراحتها: في 8-2007/12/10. تقدم لهذا الامتحان 27 أطباء، نجح منهم 8 أطباء، أي أن نسبة النجاح هي 29.5%.

اختصاص الأذن والأنف والحنجرة

1- الامتحان الأولي لاختصاص الأذن والأنف والحنجرة:

عقد الامتحان الأولي لاختصاص الأذن والأنف والحنجرة بتاريخ 2007/10/20، حيث تقدم لهذا الامتحان 62 طبيباً، ونجح منهم 31 طبيباً، أي أن نسبة النجاح هي 50%. وفيما يلي نسب النجاح حسب المراكز الامتحانية التالية:

اسم المركز	عدد المتقدمين	عدد الناجحين	%
الرياض	8	4	%50
المنامة	4	2	%50
بغداد	16	8	%50
دمشق	23	15	%65
صنعاء	2	1	%50
طرابلس	9	1	%11
المجموع	62	31	%50

2- الامتحان النهائي الكتابي لاختصاص الأذن والأنف والحنجرة:

عقد الامتحان النهائي الكتابي لاختصاص الأذن والأنف والحنجرة بتاريخ 2007/10/20، تقدم لهذا الامتحان 65 طبيباً، نجح منهم 45 طبيباً، أي أن نسبة النجاح هي 83%. وفيما يلي نسب النجاح حسب المراكز الامتحانية التالية:

اسم المركز	عدد المتقدمين	عدد الناجحين	%
الرياض	10	10	%100
المنامة	10	6	%60
بغداد	10	7	%70
دمشق	17	9	%52
صنعاء	9	9	%100
طرابلس	9	4	%11
المجموع	65	45	%69

3- الامتحان السريري والشفوي لاختصاص الأذن والأنف والحنجرة:

عقد الامتحان السريري والشفوي لاختصاص الأذن والأنف والحنجرة بتاريخ 2007/12/2-1، وقد تقدم لهذا الامتحان 50 طبيباً، نجح منهم 23 طبيباً، أي أن نسبة النجاح 46%.

اختصاص الجراحة

1- الامتحان الأولي لاختصاص الجراحة العامة:

جرى الامتحان الأولي لاختصاص الجراحة العامة بتاريخ 11/4/ 2007 في المراكز التالية: دمشق، والرياض، واربد، وصنعاء، وطرابلس، وبنغازي، والدوحة، والمنامة، وبغداد. تقدم لهذا الامتحان 309 طبيباً، نجح منهم 132 طبيباً، أي أن نسبة النجاح هي 42%. وفيما يلي نسب النجاح حسب المراكز الامتحانية التالية:

اسم المركز	عدد المتقدمين	عدد الناجحين	%
طرابلس	11	3	%27
بنغازي	13	1	%7
صنعاء	53	19	%36
دمشق	63	18	%29
بغداد	69	36	%52
المنامة	5	2	%40
الرياض	13	4	%31
الدوحة	9	6	%67
اربد	73	43	%59
المجموع	309	132	%42.7

*الامتحان النهائي:

اسم المركز	عدد المتقدمين	عدد الناجحين	%
الرياض	14	6	%42
دمشق	15	1	%6
طرابلس	8	5	%62
بنغازي	3	0	%0
عمان	2	2	%100
المنامة	9	2	%22
اليمن	15	7	%46
الخرطوم	2	1	%50
بغداد	1	0	%0
المجموع	69	24	%34

اختصاص الولادة وأمراض النساء

1- الامتحان الأولي لاختصاص الولادة وأمراض النساء:

جرى الامتحان الأولي لاختصاص الولادة وأمراض النساء بتاريخ 2007/10/21 في المراكز التالية: دمشق، واربد، ودبي، وصنعاء، وطرابلس، وبنغازي، والبحرين، والدوحة، والرياض، وبغداد. وقد تقدم لهذا الامتحان 164 طبيباً، نجح منهم 74 طبيباً، أي أن نسبة النجاح هي 45%. وفيما يلي نسب النجاح حسب المراكز الامتحانية التالية:

اسم المركز	عدد المتقدمين	عدد الناجحين	%
دمشق	22	5	%22
اربد	22	16	%72
صنعاء	34	18	%52
طرابلس	32	7	%21
البحرين	5	2	%40
الدوحة	2	2	%100
الرياض	3	0	%0
دبي	3	0	%0
بنغازي	14	2	%14
بغداد	27	22	%81
المجموع	164	74	%45

2- الامتحان النهائي الكتابي لاختصاص الولادة وأمراض النساء:

عقد الامتحان النهائي الكتابي لاختصاص الولادة وأمراض النساء بتاريخ2007/10/21 في المراكز التالية: دمشق، واربد، والمنامة ودبي، والدوحة، والرياض، وبغداد، وطرابلس، وبنغازي، وصنعاء. وقد تقدم للامتحان 225 طبيباً، نجح منهم 113 طبيباً، أي أن نسبة النجاح هي 50%، وفيما يلي نسب النجاح.

اسم المركز	عدد المتقدمين	عدد الناجحين	%
اربد	18	10	%55
المنامة	5	1	%20
دبي	15	4	%26
الرياض	32	20	%62
الدوحة	9	5	%55
بنغازي	21	5	%23
طرابلس	46	35	%76
صنعاء	39	14	%35
دمشق	35	16	%45
بغداد	5	3	%60
المجموع	225	113	%50

اختصاص طب الطوارئ

1- الامتحان الأولي الكتابي لاختصاص طب الطوارئ:

عقد الامتحان الأولي الكتابي لاختصاص طب الطوارىء بتاريخ 2007/10/28، تقدم لهذا الامتحان 46 طبيباً، نجح منهم 31 طبيباً، أي أن نسبة النجاح هي 67%. وفيما يلي نسب النجاح حسب المراكز الامتحانية التالية:

اسم المركز	عدد المتقدمين	عدد الناجحين	%
الرياض	17	11	%64
سلطنة عمان	8	4	%50
قطر	13	10	%77
صنعاء	8	6	%75
المجموع	46	31	%67

2- الامتحان النهائي الكتابي لاختصاص طب الطوارئ:

عقد الامتحان النهائي الكتابي لاختصاص طب الطوارىء بتاريخ 2007/10/29، تقدم لهذا الامتحان 41 طبيباً، نجح منهم 30 طبيباً، أي أن نسبة النجاح هي 73%. وفيما يلي نسب النجاح حسب المراكز الامتحانية التالية:

اسم المركز	عدد المتقدمين	عدد الناجحين	نسبة النجاح
الرياض	18	14	%77
سلطنة عمان	6	5	%83
قطر	14	9	%64
صنعاء	3	2	%66
المجموع	41	30	%73

2- الامتحان النهائي الكتابي لاختصاص جراحة الفم والوجه والفكين:

عقد الامتحان النهائي الكتابي لاختصاص جراحة الفم والوجه والفكين في مركز دمشق بتاريخ 2007/11/3 وقد تقدم للامتحان 6 أطباء، نجح منهم 3 أطباء، أي أن نسبة النجاح هي 50%.

3- الامتحان النهائي السريري والشفوي لاختصاص جراحة الفم الوجه والفكين:

عقد الامتحان السريري والشفوي لاختصاص جراحة الفم والوجه والفكين في دمشق بتاريخ 2007/11/4، وقد تقدم للامتحان 3 أطباء، نجح منهم أطباء 3، أي أن نسبة النجاح هي 100%.

4- اجتماع المجلس العلمي لاختصاص جراحة الفم والوجه والفكين:

عقد المجلس العلمي لاختصاص جراحة الفم والوجه والفكين، دورته الرابعة في دمشق بتاريخ 2007/11/5، وقد تم في هذا الاجتماع إجراء الانتخابات ومناقشة المواضيع المدرجة على جدول الأعمال.

اختصاص الأمراض الباطنة

عقد الامتحان الأولي والنهائي الكتابي والشرائح لاختصاص الأمراض الباطنة بتاريخ 4-2007/12/5.

اختصاص الأشعة

1- الامتحان الأولي لاختصاص التشخيص الشعاعي:

عقد الامتحان الاولي لاختصاص التشخيص الشعاعي الدورة الثانية لامتحان الجزء الأول بتاريخ 2007/10/23 في المراكز التالية: دمشق، وصنعاء، والدوحة، والرياض، واربد. وقد تقدم للامتحان 51 طبيباً، نجح منهم 21 طبيباً، أي أن نسبة النجاح هي 41%. وفيما يلي نسب النجاح حسب المراكز الامتحانية التالية:

اسم المركز	عدد المتقدمين	عدد الناجحين	%
دمشق	5	1	%20
الدوحة	7	2	%28.5
صنعاء	13	8	%61.5
الرياض	13	2	%15.3
إربد	13	8	%61.5
المجموع	51	21	%41

2- الامتحان السريري والشفوي لاختصاص التشخيص الشعاعي:

عقد الامتحان السريري والشفوي لاختصاص التشخيص الشعاعي بتاريخ 2007/12/5 في دمشق- مشفى المواساة، وقد تقدم للامتحان 13 طبيباً، نجح منهم 9 أطباء، أي أن نسبة النجاح هي 69%.

اختصاص طب الأسرة والمجتمع

1- جتماع لجنة الامتحانات لاختصاص طب الأسرة والمجتمع:

اجتمت لجنة الامتحانات للمجلس العلمي لاختصاص طب الأسرة والمجتمع في دمشق السبت والأحد والاثنين بتاريخ 27-28-29/ 2007/10. تم وضع أسئلة الامتحان الكتابي المقر عقده بتاريخ 5/ 2008/1 وأسئلة الامتحان السريري لاختصاص طب الأسرة المنعقد المقرر عقده بتاريخ 2008/1/26.

اختصاص التخدير والعناية المركزة

عقدت لجنة اعتماد النتائج المؤلفة من الأستاذ الدكتور خليل قائد الأمين العام للمجلس العربي للاختصاصات الطبية والأستاذ الدكتور علي أرناؤوط رئيس قسم التخدير في مشفى المواساة ومقرر المجلس العلمي لاختصاص التخدير والعناية المركزة اجتماعها واطلعت على أوراق الاجابة حيث تقدم للامتحان الأولي 81 طبيباً، نجح منهم 34 طبيباً، أي أن نسبة النجاح هي 41% وتقدم للامتحان النهائي 69 طبيباً، نجح مهنم 24 أطباء، أي أن نسبة النجاح هي 34%.

*الامتحان الأولي:

اسم المركز	عدد المتقدمين	عدد الناجحين	%
الرياض	20	11	%55
دمشق	5	1	%20
طرابلس	7	2	%28
عمان	12	8	%66
العراق	10	6	%60
اليمن	8	3	%38
بنغازي	6	0	%0
السودان	8	2	%25
البحرين	3	1	%33
المجموع	81	34	%41

أخبار وأنشطة المجلس العربي للاختصاصات الطبية
خلال الفترة من 2007/10/1 لغاية 2007/12/31

أنشطة المجالس العلمية

اختصاص الأمراض الجلدية

1- الامتحان الأولي لاختصاص الأمراض الجلدية والتناسلية:

عقد الامتحان الأولي لاختصاص الأمراض الجلدية والتناسلية بتاريخ 2007/11/17، في المراكز الامتحانية التالية: دمشق ودبي وصنعاء. وقد تقدم للامتحان المذكور 39 طبيباً، نجح منهم 30 طبيباً، أي أن نسبة النجاح هي 77%. وفيما يلي نسب النجاح حسب المراكز الامتحانية:

اسم المركز	عدد المتقدمين	عدد الناجحين	%
دمشق	18	14	%77
دبي	9	8	%88
صنعاء	12	8	%66
المجموع	39	30	%77

2- الامتحان النهائي الكتابي لاختصاص الأمراض الجلدية والتناسلية:

جرى الامتحان النهائي الكتابي لاختصاص الأمراض الجلدية والتناسلية بتاريخ 2007/11/17، في مركز دمشق وقد تقدم للامتحان المذكور 39 طبيباً، نجح منهم 31 طبيباً، أي أن نسبة النجاح هي 79%.

3- الامتحان السريري والشفوي لاختصاص الأمراض الجلدية والتناسلية:

عقد الامتحان السريري بتاريخ 18-2007/11/19 في مركز دمشق وقد تقدم لهذا الامتحان 37 طبيباً، نجح منهم 18 طبيباً، حملوا شهادة المجلس العلمي لاختصاص الأمراض الجلدية والتناسلية أي أن نسبة النجاح هي 46%.

اختصاص الطب النفسي

1- الامتحان الأولي لاختصاص الطب النفسي :

عقد الامتحان الأولي لاختصاص الطب النفسي بتاريخ 11/17/ 2007 في المراكز التالية: دمشق، القاهرة، البحرين، والرياض. وقد تقدم لهذا الامتحان 68 طبيباً، نجح منهم 12 طبيباً، أي أن نسبة النجاح هي 17.6%. وفيما يلي نسب النجاح حسب المراكز الامتحانية:

اسم المركز	عدد المتقدمين	عدد الناجحين	%
دمشق	10	1	%10
الرياض	7	3	%42
البحرين	15	2	%13
مصر	36	6	%16
المجموع	68	12	%17.6

2- الامتحان النهائي الكتابي لاختصاص الطب النفسي:

عقد الامتحان النهائي الكتابي لاختصاص الطب النفسي بتاريخ 17/ 2007/11 في المراكز التالية: دمشق، والقاهرة، والبحرين والرياض. وقد تقدم لهذا الامتحان 56 طبيباً، نجح منهم 44 طبيباً، أي أن نسبة النجاح هي 78.5%. وفيما يلي نسبة النجاح حسب المراكز الامتحانية:

اسم المركز	عدد المتقدمين	عدد الناجحين	%
دمشق	12	11	%91.66
الرياض	10	9	%90
البحرين	11	6	%54.54
مصر	23	18	%78
المجموع	56	44	%78.5

3- الامتحان السريري والشفوي لاختصاص الطب النفسي:

جرى الامتحان السريري والشفوي لاختصاص الطب النفسي بتاريخ 14-2007/12/15 في مشفى دير الصليب -بيروت- الجمهورية اللبنانية. وقد تقدم لهذا الامتحان 58 طبيباً، نجح منهم 29 طبيباً، أي أن نسبة النجاح هي 50%.

اختصاص جراحة الفم والوجه والفكين

1- الامتحان الأولي لاختصاص جراحة الوجه والفكين:

عقد الامتحان الأولي لاختصاص جراحة الفكين في مركز دمشق بتاريخ 2007/11/3، وقد تقدم لهذا الامتحان 13 طبيباً، نجح منهم 7 أطباء، أي أن نسبة النجاح هي 53%.

دليل النشر في مجلة المجلس العربي للاختصاصات الطبية

تتبع المقالات المرسلة إلى مجلة المجلس العربي للاختصاصات الطبية الخطوط التالية المطلوبة للمجلات الطبية من قبل الهيئة الدولية لمحرري المجلات الطبية، وإن النص الكامل لها موجود على الموقع الألكتروني http://www.icmje.org/

1- المقالات التي تتضمن بحثاً أصيلاً يجب أن لا تكون قد نشرت سابقاً بشكل كامل مطبوعة أو بشكل نص الكتروني. ويمكن نشر الأبحاث التي سبق أن قدمت في لقاءات طبية.

2- كافة المقالات المرسلة إلى المجلة تقيم من قبل لجنة تحكيم مؤلفة من عدد من الاختصاصيين، بشكل ثنائي التعمية، بالإضافة إلى تقييمها من قبل هيئة التحرير. وهذه المقالات قد تقبل مباشرةً بعد تحكيمها، أو تعاد إلى المؤلفين لإجراء تعديلات عليها، أو ترفض.

3- تقبل المقالات باللغتين العربية أو الانكليزية. ويجب أن ترسل صفحة العنوان باللغتين العربية والانكليزية، متضمنة عنوان المقال وأسماء الباحثين بالكامل باللغتين وكذلك صفاتهم العلمية. تستخدم الأرقام العربية (1، 2، 3...) في كافة المقالات.

4- يجب أن تطابق المصطلحات الطبية باللغة العربية ما ورد في المعجم الطبي الموحد (موجود على الموقع الالكتروني http://www.emro.who.int/umd/ أو http://www.emro.who.int/ahsn)، مع ذكر الكلمة العلمية باللغة الانكليزية أو اللاتينية أيضاً (يمكن أيضاً إضافة المصطلح الطبي المستعمل محلياً بين قوسين).

5- يجب احترام حق المريض في الخصوصية مع حذف المعلومات التي تدل على هوية المريض إلا في حال الضرورة التي توجب الحصول على موافقة المريض عند الكشف عن هويته بالصور أو غيرها.

6- تذكر أسماء الباحثين الذين شاركوا في البحث بصورة جدية. وتتم المراسلة مع أحد الباحثين أو اثنين منهما (يجب ذكر عنوان المراسلة بالكامل وبوضوح).

7- يجب أن تتبع طريقة كتابة المقال مايلي:

- يكتب المقال على وجه واحد من الورقة وبمسافة مضاعفة بين الأسطر (تنسيق الفقرة بتباعد أسطر مزدوج)، ويبدأ كل جزء بصفحة جديدة. ترقم الصفحات بشكل متسلسل ابتداء من صفحة العنوان، يليها الملخص مع الكلمات المفتاح keywords ثم النص فالشكر فالمراجع، يلي ذلك الجداول ثم التعليق على الصور والأشكال. يجب أن لا تتجاوز الأشكال الإيضاحية 203×254 ملم (8×10 بوصة)، مع هوامش لا تقل عن 25 ملم من كل جانب (1بوصة). ترسل كافة المقالات منسوخة على قرص مرن IBM compatible أو قرص مكتنز CD، وترسل الورقة الأصلية مع 3 نسخ. يمكن إرسال المقالات بالبريد الالكتروني على jabms@scs-net.org إذا أمكن من الناحية التقنية. يجب ان يحتفظ الكاتب بنسخ عن كافة الوثائق المرسلة.
- البحث الأصيل يجب أن يتضمن ملخصاً مفصلاً باللغتين العربية والانكليزية، يشمل 4 فقرات كالتالي: هدف الدراسة وطريقة الدراسة والنتائج والخلاصة، وألا يتجاوز 250 كلمة. يجب إضافة 3-10 كلمة مفتاح بعد الملخص.
- البحث الأصيل يجب ألا يتجاوز 4000 كلمة (عدا المراجع)، وأن يشمل الأجزاء التالية: المقدمة، وطريقة الدراسة، والنتائج، والمناقشة، والخلاصة. يجب شرح طريقة الدراسة بشكل واضح مع توضيح وتبرير المجموعة المدروسة، وذكر الأدوات المستعملة (نوعها واسم الشركة الصانعة) والإجراءات المتبعة في الدراسة بشكل واضح للسماح بإمكان تكرار الدراسة ذاتها. الطرق الإحصائية يجب أن تذكر بشكل واضح ومفصل للتمكن من تحري نتائج الدراسة. يجب ذكر الأساس العلمي لكافة الأدوية والمواد المستعملة، مع الجرعات وطرق الإعطاء. الجداول والصور والأشكال يجب أن تستخدم لشرح ودعم المقال، ويمكن استخدام الأشكال كبديل عن الجداول، مع عدم تكرار نفس المعطيات في الجداول والأشكال. إن عدد الجداول والأشكال يجب أن يتناسب مع طول المقال، ومن المفضل عدم تجاوز 6 جداول في المقال الواحد. المناقشة تتضمن النقاط الهامة في الدراسة، ويجب ذكر تطبيقات وتأثير النتائج، وحدودهما، مع مقارنة نتائج الدراسة الحالية بمثيلاتها، متجنبين الدراسات غير المثبتة بالمعطيات. توصيات الدراسة تذكر حسب الضرورة.
- الدراسات في الأدب الطبي يفضل أن لا تتجاوز 6000 كلمة (عدا المراجع)، وبنية المقال تتبع الموضوع.
- تقبل تقارير الحالات الطبية حول الحالات الطبية السريرية النادرة. ويجب أن تتضمن ملخصاً قصيراً غير مفصل.
- تقبل اللوحات الطبية النادرة ذات القيمة التعليمية.
- يمكن استعمال الاختصارات المعروفة فقط، ويجب تجنب الكلمات المختصرة في العنوان والملخص. ويجب ذكر التعبير الكامل للاختصار عند وروده الأول في النص إلا لوحدات القياس المعروفة.
- يستعمل المقياس المتري (م، كغ، لتر) لقياسات الطول والارتفاع والوزن والحجم، والدرجة المئوية لقياس درجات الحرارة، والمليمترات الزئبقية لقياس ضغط الدم. كافة القياسات الدموية والكيماوية السريرية تذكر بالمقياس المتري تبعاً للقياسات العالمية SI.
- فقرة الشكر تتضمن الذين أدوا مساعدات تقنية. ويجب ذكر جهات الدعم المالية أو المادي.
- المراجع يجب أن ترقم بشكل تسلسلي حسب ورودها في النص. وترقم المراجع المذكورة في الجداول والأشكال حسب موقعها في النص. ويجب أن تتضمن المراجع أحدث ما نشر من معلومات. تختصر أسماء المجلات حسب ورودها في Index Medicus ، ويمكن الحصول على قائمة الاختصارات من الموقع الالكتروني http://www.nln.nih.gov/. تتضمن كتابة المرجع معطيات كافية تمكن من الوصول إلى المصدر الرئيسي، مثال: مرجع المجلة الطبية يتضمن اسم الكاتب وعنوان المقال واسم المجلة وسنة الإصدار والمجلد ورقم الصفحة. مرجع الكتاب يتضمن اسم الكاتب والمحرر والناشر ومكان ومؤسسة النشر ورقم الجزء ورقم الصفحة. وللحصول على تفاصيل حول كيفية كتابة المراجع الأخرى يمكن زيارة الموقع الالكتروني http://www.icmje.org/. وإن الكاتب مسؤول عن دقة المراجع، والمقالات التي لا تقبل مراجعها لا يمكن نشرها وتعاد إلى الكاتب لتصحيحها.

8- إن المقالات التي لا تطابق دليل النشر في المجلة لا ترسل إلى لجنة التحكيم قبل أن يتم تعديلها من قبل الكاتب.

هذه المجلة مفهرسة في سجل منظمة الصحة العالمية IMEMR Current Contents
http://www.emro.who.int/HIS/VHSL/Imemr.htm.

مجلة المجلس العربي للاختصاصات الطبية

مجلة طبية دورية محكّمة تعنى بكافة الاختصاصات الطبية
تصدر كل ثلاثة أشهر

مجلة المجلس العربي للاختصاصات الطبية **هي مجلة طبية تصدر كل ثلاثة أشهر، تعنى بكافة الاختصاصات الطبية، تهدف إلى نشر أبحاث الأطباء العرب لتقوية التبادل العلمي الطبي العربي، وكذلك نشر أخبار وأنشطة المجلس العربي للاختصاصات الطبية.**

تقبل المجلة الأبحاث الأصيلة *Original Articles*، والدراسات في الأدب الطبي *Review Articles*، وتقارير عن الحالات الطبية الهامة *Case Reports* ، وذلك بإحدى اللغتين العربية والانكليزية، مع ملخص مرفق باللغة الأخرى، كما تقبل رسائل إلى المحرر عن المواضيع والملاحظات الطبية.

تقوم المجلة أيضاً بنشر ملخصات منتقاة من المقالات المهمة المنشورة في المجلات العلمية والطبية الأخرى، وذلك باللغة العربية، بهدف تسهيل إيصالها إلى الطبيب العربي.

تخضع مقالات المجلة للجنة تحكيم اختصاصية مؤلفة من السادة الأساتذة الأطباء رؤساء المجالس العلمية للاختصاصات الطبية، وبمشاركة الأساتذة الأطباء أعضاء هذه المجالس وأساتذة الجامعات والاختصاصيين في كافة البلاد العربية.

نرسل كافة المراسلات إلى العنوان التالي:

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