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Correspondence to: *Journal of the Arab Board of Health Specializations*
The Arab Board of Health Specializations
P.O. Box 7669, Damascus, Syria.
Tel: +963-11-6119742/6119249 Fax: +963-11-6119259/6119739.
E-mail: jabhs@scs-net.org

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

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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.
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6. All authors who participated effectively in the work should be listed. One or two authors should take responsibility for correspondence about the work with valid E-mail address should be reported.
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- Manuscripts should be double spaced in entirety with each section on a new page. Do not use both sides of the paper. Number the pages consecutively from the first page to the last in the following sequence: title page (including the authors' names in both languages along with scientific titles and addresses), abstract, text, acknowledgments, references, tables and legends. Illustrations and explanatory 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 CD. The original typed manuscript plus 3 additional copies should be submitted. Alternatively, the manuscript may be submitted by E-mail (jabms@sce-net.org) if it is technically feasible. The authors should maintain copies of all material submitted.
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- Use only standard abbreviations; 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, and liter) or their decimal multiples. Temperatures should be given in Celsius degrees. 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).
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- 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: 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: authors (all of them), article title, journal, year, volume, page; (2) book: authors (all of them), editor, publisher and place of publication, organization, chapter, and 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.

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Journal of the Arab Board of Health Specializations

A Medical Journal Encompassing all Health Specializations

Issued Quarterly

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Letter from the Editor

Nanotechnology and Medicine

Nanotechnology involves manipulating properties and structures at the nanoscale, often involving dimensions that are just tiny fractions of the width of a human hair. Nanotechnology is already being used in products in its passive form, such as cosmetics and sunscreens, and it is expected that in the coming decades, new phases of products, such as better batteries and improved electronics equipment, will be developed and have far-reaching implications.

One area of nanotechnology application that holds the promise of providing great benefits for society in the future is in the realm of medicine. Nanotechnology is already being used as the basis for new, more effective drug delivery systems and is in early stage development as scaffolding in nerve regeneration research. Moreover, nanomedicine could lead to breakthroughs in terms of detecting, diagnosing, and treating various forms of cancer.

There are numerous examples of disease-fighting strategies in the literature, using nanoparticles. Often, particularly in the case of cancer therapies, drug delivery properties are combined with imaging technologies, so that cancer cells can be visually located while undergoing treatment. The predominant strategy is to target specific cells by linking antigens or other biosensors (e.g. RNA strands) to the surface of the nanoparticles that detect specialized properties of the cell walls. Once the target cell has been identified, the nanoparticles will adhere to the cell surface, or enter the cell, via a specially designed mechanism, and deliver its payload

Once the drug is delivered, if the nanoparticle is also an imaging agent, doctors can follow its progress and the distribution of the cancer cell is known. Such specific targeting and detection will aid in treating late-phase metastasized cancers and hard-to-reach tumors and give indications of the spread of those and other diseases. It also prolongs the life of certain drugs that have been found to last longer inside a nanoparticle than when the tumor was directly injected, since often drugs that have been injected into a tumor diffuse away before effectively killing the tumor cells

Nanotechnology medical developments over the coming years will have a wide variety of uses and could potentially save a great number of lives. Nanotechnology is already moving from being used in passive structures to active structures, through more targeted drug therapies or “smart drugs.” These new drug therapies have already been shown to cause fewer side effects and be more effective than traditional therapies. In the future, nanotechnology will also aid in the formation of molecular systems that may be strikingly similar to living systems. These molecular structures could be the basis for the regeneration or replacement of body parts that are currently lost due to infection, accident, or disease. These predictions for the future have great significance not only in encouraging nanotechnology research and development but also in determining a means of oversight.

Professor M. Hisham Al-Sibai
Editor-in-chief
Secretary General of the Arab Board of Health Specializations

Original Article

موضوع إصيل

VENTRICULAR SEPTAL DEFECT AND IT'S EFFECTS ON THE GROWTH PATTERN IN CHILDREN BELOW FIVE YEAR

الفتحة بين البطينين ومدى تأثيرها على نمو الأطفال دون الخامسة من العمر

Jasim M. Al-Marzoki, *MD*

جاسم محمد المرزوكي

ملخص البحث

هدف البحث: دراسة التصنيف الشكلي للفتحات بين البطينين VSD ومدى تأثيرها على الوزن، الطول، ومحيط الرأس (المحيط القفوي الجبهي) للأطفال دون سن الخامسة من العمر.

طرق البحث: أجريت دراسة من نمط الحالات والشواهد شملت 50 مريضاً لديهم فتحة بين البطينين من المراجعين لمشفى بابل التعليمي لأمراض النسائية والأطفال (مرضى خارجيين ومرضى مقبولين في المشفى)، وذلك في الفترة من كانون الثاني إلى تموز لعام 2008 حيث تمت دراسة التصنيف الشكلي للفتحات بين البطينين وتأثيراتها على مشعرات النمو. من جهةٍ أخرى تم اختيار 50 طفلاً من الأصحاء موافقين بالعمر من المراجعين للمراكز الصحية الأولية شكلوا مجموعة شاهد.

النتائج: تراوحت أعمار المرضى بين يوم واحد و5 سنوات، حيث كان معظم المرضى (60%) دون السنة من العمر مع نسبة ذكور: إناث بلغت 1.6: 1. تظاهرت الحالة لدى 76% من المرضى خلال الأشهر الستة الأولى من العمر. لوحظ أن النمط الأشيع للفتحات بين البطينين VSD هو النمط الغشائي (72%)، كما أن الفتحات في نصف الحالات المدروسة كانت صغيرة الحجم (52%). لوحظ أن الوزن ومحيط الرأس هي مشعرات حساسة لدراسة تأثير الفتحة بين البطينين على النمو، حيث أنها تأثرت بشكل كبير بحجم الفتحة بين البطينين مع عدم وجود تأثير هام للجنس على النمو عند مرضى الفتحة بين البطينين.

الاستنتاجات: يتأثر كل من الوزن ومحيط الرأس بشكل هام عند مرضى الفتحة بين البطينين مع عدم وجود تأثير للجنس بالنسبة لهذه الحالة. لوحظ تأثر النمو في حالات الأحجام الكبيرة والمتوسطة للفتحات بين البطينين ولذلك يجب مراعاة معالجة هذه الحالة بدقة وبشكل مبكر ما أمكن.

ABSTRACT

Objective: *To study the morphological classification of VSD and its effects on weight, height and occipitofrontal circumference of children below five years.*

Methods: *A case control study of fifty patients with isolated Ventricular septal defect (VSD) from Babylon maternity and children teaching hospital (outpatient and inpatient), was done in regard to morphological classification of VSD and its effect on growth parameters, for the period from January to July, 2008. Another 50 healthy children of the same ages attending primary health center were chosen as a control group.*

Results: *The patients were ranging between 1 day to 5 years; most of them (60%) were below 1 year of age with male to female ratio of 1.6:1. About (76%) were presented in the first 6 months of life. The most common type of VSD was perimembranous type (72%), about half (52%) of VSD was small size. Weight and occipitofrontal circumference (OFC) were sensitive*

*Jasim M. Al-Marzoki, MD, C.A.B.P, Consultant Pediatrician, Department of Pediatrics, Babylon Medical College, Babylon University, Hilla-Iraq, Babylon Maternity and Children Teaching Hospital. E-mail: jasim_20042001@yahoo.com.

parameters for studying the effect of VSD on growth and it was greatly affected by the size of VSD with no significant effect of the gender on growth of the patients with VSD.

Conclusions: *Weight and OFC were affected significantly by the presence of VSD, with no effect for gender. Growth is affected by moderate and large sized VSD, so it should be managed early and carefully.*

INTRODUCTION

Ventricular septal defect (VSD) is the most common cardiac malformation account for 25-30% of congenital heart disease (CHD). Defects may occur in any portion of the ventricular septum, but mostly in the membranous part of the septum.[1] The incidence of VSD in all live births is approximately 1.5 to 3.5 per 1000 term infants[2,3] and 4.5 to 7 per 1000 premature infants.[4] VSD is slightly more common in females.[4] There are a number of chromosome abnormalities that are associated with VSD although they account for less than 5% of the total. They especially include the trisomies, Edwards' syndrome, Patau's syndrome and Down's syndrome.[5] VSD classified anatomically by Soto et al[6] into: perimembranous, muscular, inlet, and outlet VSD. Defect size is expressed in terms of the size of the aortic root. Lesions that approximate the size of the aorta are considered large; lesions one-third to two-thirds the diameter of the aorta are considered moderate; and lesions less than one-third the aortic root diameter are considered small.[7] The establishment of correct and complete diagnosis of VSD often requires: history, physical examination, electrocardiogram (ECG), chest X-ray (CXR), echocardiography (Echo) with doppler study, catheterization and angiocardiography.[8,9]

Growth pattern was affected by VSD, due to: chronic inadequate caloric intake.[10] Large VSD can lead to heart failure which will increase the tissue hypoxia and the possibility of chest infections,[11] hypermetabolic state and increase oxygen consumption.[12] VSD is a part of a larger chromosomal embryopathy syndromes, and the pulmonary–systemic flow ratio is strongly related to weight, while pulmonary–systemic pressure ratio affect both height and weight.[13]

The aims of this work is to study the morphological classification of VSD and its effects on weight, height and occipitofrontal circumference of children below five years.

METHODS

A case control study of fifty patients (31 males, and 19 females) ranging between 1 day to 5 years old with isolated VSD was done for the period from January to July 2008 in Babylon maternity and children teaching hospital (in patient and out patient). The diagnosis of our patients was depending on clinical picture and confirmed by Echocardiographic examination. The Echocardiographic examination (two–dimensional and colour doppler) was done by 4 and 8 MHz sector probe while the patient on supine or left decubitus position. Defect size was often given in terms of the size of the aortic root, where lesions that approximate the size of the aorta are considered large; lesions one-third to two-thirds the diameter of the aorta are considered moderate; and lesions less than one-third the aortic root diameter are considered small.[7] In those patients the growth parameters (weight, lenght/height and head circumference) were measured, the weight seca scales (maximum weight scale 16 kg) was used for young patients and AVERY scale was used for older patients. Infants were weighed in naked state. Older children were weighed in light underclothes and without shoes. The height is measured by standing the pateint on the foot plate of the stadiometer, with heels together and head in the Frankfort plan (i.e. with the lower border of the orbit in the same horizontal plan as the external auditory meatus). The top of the stadiometer being Counter–balanced, rested lightly on the patient's head. he patient then stretched upward fully, aided by relaxing the shoulders and by applying gentle pressure on the mastoid processes. Supine length was measured with the child lying on his back, with the child's head in the Frankfort plane and applied gentle lengthwise pressure to bring the top of his head in to contact with the fixed headboard with the child's feet toes pointing directly upwards, and, also pulling gently to stretch the child, brought the moveable foot-board to rest firmly against the child's heels. The head circumference (OFC) was measured by non stretchable tape measure by three

readings then take mean of them. The measurements were expressed as centiles when plotted on weight for age, height for age, using Tanner white house growth chart[13] and OFC for age using Nellhaus chart.[14] Fifty healthy children of the same age group attending primary health care center for vaccination were chosen as a control group where they examined for weight, height/length and OFC and the measurements were expressed also on the same growth charts. The following statistical methods were used: descriptive statistics (mean, standard deviation. (SD), Graphics), and Chi–square test. p-value ≤ 0.05 was regarded as significant difference, and p-value of 0.01 was regarded as highly significant difference.

RESULTS

Table 1 shows the significant difference regarding the gender, age of first presentation, morphological classifications and size of VSD, where the male: female ratio of 1.6: 1 with significant difference. Thirty-eight patients (76%) were presented in the first 6 months of age. Regarding morphological classification of VSD, the most common type was perimembranous (72%) followed by muscular, inlet and outlet types 20%, 6% and 2% respectively. About half of patients (52%) had small size, followed by moderate and large defects, 30%, and 18% respectively. There was no significant difference between the patients with VSD and control group regarding their age, (Table 2). Twenty-three patients (46%) with VSD were below 5th centile for their weight, while it was only 5 (10%) for age matched control group, with significant difference (p-value <0.05). There was no significant difference (p-value>0.05) between patients and age matched control group regarding height/length/age centile. 23% of patients with VSD had an OFC below 5th centile, while it was 10% for age matched control group with significant difference (p-value <0.05) as shown in (Table 2). There was a significant difference regarding the relation between VSD size and all growth parameters including, weight\ age centile, height/length/age centile and OFC\age centile (p-value<0.05), where patients with large VSD who were below 5th centile constitute 89%, 42%, and 34% respectively as shown in (Table 3). There was no significant difference (p-value>0.05) between males and females regarding Weight, Height and OFC\age centile for age, (Figures 1, 2, 3). Out of 50 patients with VSD, only 5 (10%) patients had both weight and height below 5th centile and another five (10%) patients with VSD had weight, height and OFC centile below 5th centile as in (Tables 4 and 5).

	Variables	% of patients	p-value
Gender	Male	62	< 0.05
	Female	38	
Age of first presentation	≤0.5 years	76	< 0.05
	>0.5-1 years	8	
	>1-2 years	6	
	>2-3 years	4	
	>3-4 years	4	
	>4-5 years	2	
Morphological types of VSD	Perimembranous	72	< 0.05
	Muscular	20	
	Inlet	6	
	Outlet	2	
Size of VSD	Small	52	< 0.05
	Moderate	30	
	Large	18	

Table 1. Distribution of patients according to gender, age of first presentation, types and size of VSD.

	Variables	% of patients with VSD	% of control group	p-value
Age	≤ 0.5 years	40	32	>0.05
	> 0.5-1 years	20	30	
	> 1-2 years	14	16	
	> 2-3 years	10	12	
	> 3-4 years	8	4	
	> 4-5 years	8	6	
Weight/age centile	< 5th centile	46	10	< 0.05
	5th-10th centile	16	20	> 0.05
	10th-25th centile	12	32	< 0.05
	25th-50th centile	12	20	> 0.05
	50th-75th centile	14	18	> 0.05
Length-height/age centile	< 5th centile	19	12	> 0.05
	5th-10th centile	17	12	> 0.05
	10th-25th centile	25	18	> 0.05
	25th-50th centile	25	28	> 0.05
	50th-75th centile	14	30	< 0.05
OFC/age centile	< 5th centile	23	10	< 0.05
	5th-10th centile	17	10	> 0.05
	10th-25th centile	39	30	> 0.05
	25th-50th centile	15	36	< 0.05
	50th-75th centile	6	14	> 0.05

Table 2. Comparison between patients with VSD and age matched control groups.

	Centile	% of small VSD	% of moderate VSD	% of severe VSD	p-value
Weight/ Age	< 5th	15	66	89	< 0.05
	5th-10th	28	20	0	< 0.05
	10th-25th	19	0	0	< 0.05
	25th-50th	15	7	11	> 0.05
	50th-75th	23	7	0	< 0.05
Length-height/age	< 5th	11	20	45	< 0.05
	5th-10th	8	20	22	> 0.05
	10th-25th	15	20	11	> 0.05
	25th-50th	27	6	22	< 0.05
	50th-75th	39	34	0	< 0.05
OFC/age	< 5th	15	27	34	< 0.05
	5th-10th	12	34	33	< 0.05
	10th-25th	11	13	11	> 0.05
	25th-50th	39	14	22	< 0.05
	50th-75th	23	12	0	< 0.05

Table 3. Distribution of patients according to VSD size and their Weight, Length-Height, and OFC/age centile.

Age	Gender	VSD size	VSD types	Pulmonary blood pressure
2 month	Female	Moderate	Perimembranous	Normal
3 month	Male	Large	Perimembranous	Moderate
6 month	Male	Small	Perimembranous	Normal
4 year	Male	Moderate	Perimembranous	Severe
4.3 year	Male	Large	Perimembranous	Mild

Table 4. Distribution of five patients with VSD who were below 5th centile for both weight and height/length centile according to age, gender, VSD size and type and pulmonary blood pressure.

Age	Gender	VSD size	VSD types	Pulmonary blood pressure
3 month	Female	Moderate	Perimembranous	Mild
4 month	Male	Large	Perimembranous	Moderate
6 month	Male	Small	Perimembranous	Moderate
4 year	Male	Moderate	Perimembranous	Severe
4.3 year	Male	Large	Perimembranous	Severe

Table 5. Distribution of five patients with VSD who were below 5th centile for weight, height/length and OFC centile according to age, gender, VSD size and type and pulmonary blood pressure.

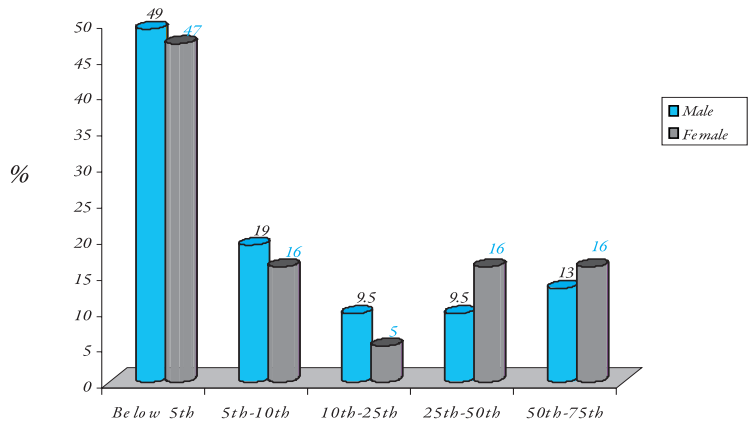

Figure 1. Relation between gender and weight/age centile in patients with VSD.

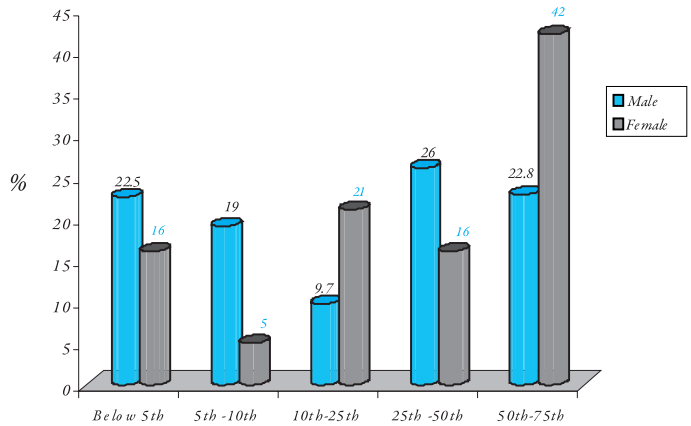

Figure 2. Relation between gender and height/age centile in patients with VSD.

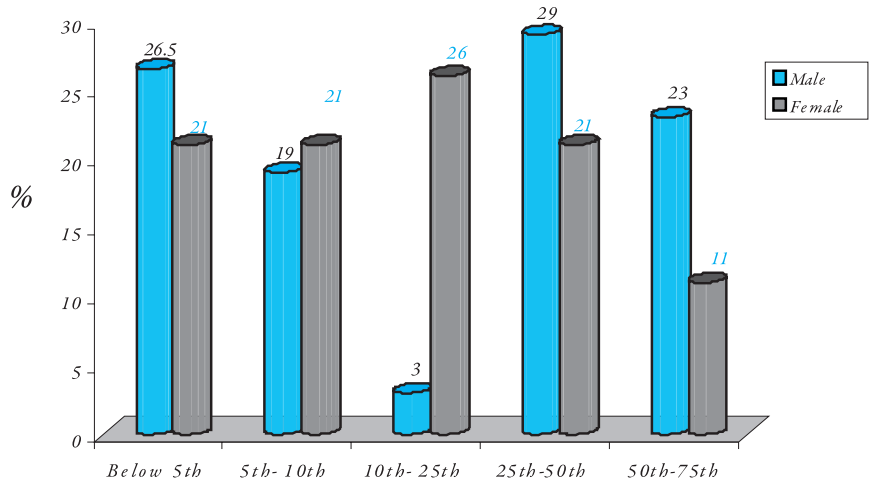

Figure 3. Relation between gender and OFC/age centile in patients with VSD.

DISCUSSION

In this study, 76% of patients with isolated VSD were presented in the 1st months of age, since feeding is the most strenuous activity in the early months, the infant progressively tires with feeding. This symptom began during the first month of life, so most of patients were seen in the first 6 months of life[15] and this figure was more than Aziz ST, and Rasheed AR studies, which were done in Baghdad/Iraq as theses submitted to the Iraqi Board for Medical Specializations in partial fulfillment of the requirement for the degree of fellowship in pediatrics 1995 and 2005 respectively, and another study done in Ceylon,[16] which could be explained by good parental care. There was significant difference regarding gender, with male preponderance whish is similar to Aziz study, and differs from other studies that showed female preponderance or similar sex distribution with no significant difference, as in the study which was done in Ceylon[16] and Rasheed study. In the current study, perimembranous VSD was most common type (72%) and the least common type was outlet type that agrees with Zair HK study, that was done in Ibn-Albitar Teaching Hospital, Baghdad/Iraq as a thesis submitted to the Iraqi Board for Medical Specializations in partial fulfillment of the requirement for the degree of fellowship in pediatrics 2005,[17] and 46% of children with VSD studied were below the 5thcentile for weight, (22%) were below 5th centile for OFC, and (18%) were below 5th centile for height, and this agrees with Rasheed study finding (40%, 24% and 28%) respectively, and Aziz study who found that (46.8%) of patients were below the 5th centile for weight and (25.5%) were below the 5th centile for height, and this is may be due to poor follow up, poor medical management, and no surgical interferences (palliative and corrective) in the current Iraqi situation. There was significant difference between patients with VSD and control group regarding weight and OFC/age centile. This indicates that these are sensitive indicators for growth especially in patients below 6 months of age and it indicates that VSD and its sequelae had an obvious effect on this growth parameter for these children. There was no significant difference between patients and age matched control group regarding length-height/age centile and this may be related to that illness is too early to affect the height, these findings are similar to Rasheed study. This study reveals that the weight, length-height and OFC were significantly affected (p-value<0.05) by the large and moderate sized VSD, and this could be explained on the basis that moderate and large VSD can lead to heart failure, which will increase tissue hypoxia and the possibility of chest infections.[11] There were no significant difference (p-value >0.05) from the gender point of view in regard to growth retardation, and this agrees with Aziz and Rasheed studies. Both weight and length\height below 5th centile were seen in 5 patients (10%) as seen in Table 4, and another 5 patients (10%)

had weight, OFC and length\height below 5th centile as shawn in Table 5, (i.e. 10% of VSD patients were at risk of eurodevelopmental delay and intellectual retardation because the maximum brain growth and increase in head circumference is during the early years of life.[18] Most of those patients developed pulmonary hypertension. (80%), which indicate that it plays an important role because increase pulmonary arterial pressure lead to increase pulmonary vascular resistance and so increase pulmonary vascular disease which causing increase risk of heart failure and recurrent chest infections.

CONCLUSIONS

Most of patients with VSD in the current study were presented in the first 6 months of life. VSD were more common in males than females with significant difference. Most common type of VSD was perimembranous type. Weight and OFC were affected significantly by the presence of VSD. Growth is affected by moderate and large sized VSD, so it should be managed early and carefully. Gender had no significant effect on growth of patients with VSD.

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Original Article

موضوع إصيل

ACCURACY OF ENDOSCOPIC ULTRASOUND GUIDED FINE NEEDLE ASPIRATION BIOPSY IN DIAGNOSIS OF MEDIASTINAL AND PANCREATIC PATHOLOGY AT KING HUSSEIN MEDICAL CENTRE 2003-2006

دقة الخزعة الإرتشافية بالإبرة الدقيقة الموجهة بالإيكو عبر التنظير في تشخيص آفات العقد اللمفاوية المنصفية والآفات البنكرياسية في مدينة الحسين الطبية في الأردن بين عامي 2003-2006

Ali Mothanna Al-Zubaidi, *MD*

د. علي مثنى الزبيدي

ملخص البحث

هدف البحث: تقييم حساسية، نوعية ودقة الخزعة الارتشافية بالإبرة الدقيقة الموجهة بالإيكو عبر التنظير (EUS-FNAB) في تشخيص آفات العقد اللمفاوية المنصفية، الآفات داخل البطن والآفات البنكرياسية.

طرق البحث: تم إجراء هذه التقنية عند 64 مريضاً لديهم آفات في العقد المنصفية أو آفات داخل البطن أو آفات بنكرياسية وذلك في مشفى مدينة الحسين الطبية في الفترة بين آذار 2003 ونيسان لعام 2006. شمل البحث 25 مريضاً يعانون من آفات في العقد المنصفية، 37 مريضاً لآفات بنكرياسية ومريضين لآفات في العقد اللمفاوية داخل البطن. تراوحت أعمار المرضى بين 40 و70 سنة بينما توزعوا تبعاً للجنس فكان 40 منهم من الرجال و24 نساء. تم استبعاد 5 مرضى من الدراسة: 4 رجال وامرأة واحدة وذلك لعدم كفاية العينة المأخوذة وجميعهم كانوا لعينات بنكرياسية. تم إجراء هذه الدراسة للحصول على التشخيص الأولي، أما التشخيص النهائي للحالة فقد اعتمد على المتابعة السريرية، الفحص الخلوي و/أو النتائج الجراحية.

النتائج: لوحظ أن الخزعة الارتشافية بالإبرة الدقيقة الموجهة بالإيكو عبر التنظير ذات حساسية ونوعية عالية كأداة تشخيصية أولية في آفات العقد المنصفية، كما أن لها دوراً في تمييز الآفات السليمة عن الخبيثة بحيث بلغت مجمل دقتها 91.5%، حساسيتها 85.3% ونوعيتها 100%. أما بالنسبة لنمط الآفة، فقد بلغت قيم الحساسية، النوعية، الدقة، القيمة التنبؤية السلبية، القيمة التنبؤية الإيجابية 92.8%، 100%، 96%، 91.6% و100% على الترتيب بالنسبة لآفات العقد اللمفاوية المنصفية، بينما بلغت هذه القيم 80%، 100%، 88%، 77.7% و100% للآفات البنكرياسية على الترتيب. تم الوصول لتشخيص أولي للخباثة باستخدام هذه التقنية في 49% من الحالات (29 من أصل 59 مريضاً) المشتبه بها سريرياً. لوحظ أن دقة وحساسية هذه التقنية أقل في الآفات البنكرياسية بالمقارنة مع آفات العقد اللمفاوية. لم يلاحظ تطور أية اختلاطات لهذه التقنية في هذه الدراسة ربما لصغر حجم العينة المدروسة.

الاستنتاجات: تمثل الخزعة الإرتشافية بالإبرة الدقيقة الموجهة بالإيكو عبر التنظير (EUS-FNAB) إجراءً آمناً، قليل الغزو، قادراً على توفير عينات نسيجية كافية للفحص والتشخيص الخلوي المرضي، كما أن هذه التقنية تعطي تشخيصاً دقيقاً لآفات المنصف، سرطان البنكرياس، كما أنها تفيد في التمييز بين الآفات السليمة والخبيثة.

ABSTRACT

Objective: *To evaluate the sensitivity, specificity and accuracy of endoscopic ultrasonography guided fine-needle aspiration biopsy (EUS-FNAB) of lymph nodes in mediastinal, intra abdominal and pancreatic lesions.*

Methods: *Sixty-four consecutive patients with mediastinal lymphadenopathy, pancreatic lesions and intra abdominal lymphadenopathy were examined by EUS+FNA at King Hussein Medical Centre, Amman,*

*Ali Mothanna Al-Zubaidi, MD, National Guard, King Abdul-Aziz Medical City, King Fahed Hospital, Al-Riyadh, Saudi Arabia. E-mail: dr_ali26@yahoo.com.

Jordan between March 2003 and April 2006. Twenty five patients were examined for mediastinal lymph nodes, 37 for pancreatic lesions and two for abdominal lymph nodes. Our patients were 40 men and 24 women with average age between 40 and 70 year. Five patients were excluded from the study; 4 men and 1 woman because of inadequate sample all of them from pancreatic lesion. The study was performed to obtain primary diagnosis, final diagnosis was based on clinical follow up, cytology and/or surgical results.

Results: *The endoscopic ultrasound guided fine needle aspiration biopsy of mediastinal nodal and pancreatic lesions were highly sensitive and specific as primary diagnosis procedures, and to differentiate between benign and malignant lesions with overall accuracy of 91.5%, sensitivity of 85.3% and 100% specificity. Regarding the lesion type; the sensitivity, specificity, accuracy, negative predictive value and positive predictive value were 92.8%, 100%, 96%, 91.6% and 100% for mediastinal lymph node; 80%, 100%, 88%, 77.7% and 100% for pancreatic lesion respectively. Primary diagnosis of malignancy was obtained by endoscopic ultrasound guided fine-needle aspiration biopsy in 49% (29/59) of patients with clinically suspicious lesion. The accuracy and sensitively for pancreatic lesion is lower than that for lymph node. No complications were reported in our study (this could be due to small sample size).*

Conclusions: *Endoscopic Ultrasound Guided Fine-Needle Aspiration Biopsy (EUS-FNAB) is safe, minimally invasive and can readily obtain adequate tissue specimens for cytopathological diagnosis, moreover it provides accurate diagnosis of mediastinum, pancreatic cancer and differentiate malignant from benign lesions.*

INTRODUCTION

Endoscopic ultrasound (EUS) has proved to be superior for the detection of pancreatic tumours and nodal metastases, as well as for local tumour staging of other gastrointestinal malignancies.

However, EUS can't reliably differentiate nodal metastases from inflammatory nodes or pancreatic tumour from focal pancreatitis. The development of echo endoscopes capable of performing real time, ultrasound directed needle aspiration cytology has greatly enhanced our ability to assess lymph nodes and differentiate inflammatory from neoplastic masses.

Several studies have described the role of Endoscopic Ultrasound Guided Fine Needle Aspiration Biopsy in pancreatic lesions, nodal metastases and confirmed the improved specificity and accuracy of the technique as minimally invasive and provides cytological confirmation of malignant mediastinal disease.[1-3]

During the past years, several case series in which endoscopic US–guided FNAB was used to evaluate mediastinal lymphadenopathy have been described. Since the initial description of endoscopic US–guided FNAB of mediastinal lymph nodes, this technique has been shown to be highly sensitive and specific for the primary tissue diagnosis and assisting in the staging of patients with non small cell lunge cancer (NSCLC).[4-14]

Our study was conducted to evaluate the sensitivity, specifity, and accuracy of EUS-FNA using the linear array echoendoscope in the primary diagnosis of pancreatic malignancy and mediadtinal lymph node at King Hussein Medical Centre Amman, Jordan.

METHODS

Sixty-four consecutive patients with mediastinal lymphadenopathy, pancreatic lesions and intra abdominal lymphadenopathy were examined by EUS-FNAB at King Hussein Medical Centre, Amman, Jordan between March 2003 and April 2006 (40 men and 24 women) with mean age 55 (range from 40-70 year) underwent EUS-FNAB of 67 mass or nodal lesions using linear array echoendoscope.

Twenty five patients were examined for mediastinal lymph nodes, 37 for pancreatic lesions and two for abdominal lymph nodes.

Informed consent was obtained from all patients, patients were excluded if there was

uncontrolled coagulopathy, severe thrombocytopenia, cardiopulmonary or other co morbid disease.

The study was performed to obtain primary diagnosis, final diagnosis was based on clinical follow up, cytology and or surgical results.

EUS-FNAB was performed in an outpatient or inpatient basis in the endoscopy unit. The oropharynx was sprayed with 1% xylocaine and conscious sedation was achieved using a combination of meperidine and midazolam. Prophylactic antibiotics were given in patients with cystic lesions undergoing biopsy, as well as for endocarditis prophylaxis when needed.

Primary evaluation of the target lesion was performed with ultrasound, computed tomography (CT) scan and/ or linear endoscopic ultrasound.

EUS-FNAB was then done using the curved linear array echoendoscope (FG-32UA, Pentax). This echoendoscope with Doppler capability is a 60 degree oblique forward viewing instrument with the ultrasonic transducer mounted in front of the optic lens. As the scanning plane is in the long axis of the instrument, real time visualisation of the biopsy needle is permitted. Two different needle catheter systems were utilised: a 22 gauge, 8 cm adjustable needle (Wilson-Cook Inc., Winston-Salem, North Carolina, USA) and a metal spiral sheath and handle with a 22 gauge, 6 cm adjustable needle (GIP, Medi-Globe Inc. Germany).

After localisation of the target lesion, Doppler imaging was used to identify adjacent vascular structures. Lesions in and adjacent to the head of pancreas were best seen with the transducer in the duodenal bulb, whereas lesions in the body and tail were sampled via the transgastric approach. The coeliac axis was identified branching from the aorta in longitudinal view and was used as a landmark to locate coeliac nodes. Mediastinal nodes in the subcarinal and aortopulmonary window regions were located with the endoscope in the oesophagus. The needle-catheter system was inserted through the working channel of the endoscope and the needle was advanced into the lesion using real time ultrasound, taking care not to pass through intervening vessels or the primary mucosal tumour when sampling lymph nodes.

Following removal of the sty let, a 10 ml syringe was applied to the hub of the needle and suction applied as the needle was moved back and forth within the lesion. When aspiration was completed, suction was released, the needle withdrawn into the sheath, and the catheter system then removed through the biopsy channel. The aspirated material was sprayed onto glass slides and preserved with Diff-Quik stain for immediate review by an on site cytopathologist. Residual material within the needle was collected for processing into a cell block. The attending cytopathologist verified adequacy of specimens and advised as to the need for additional passes. The procedure was terminated when adequate cellular specimens were achieved.

The patients were observed for immediate complications in the recovery room for two hours before discharge. Post procedural laboratory or radiological data were not obtained unless a suspected complication arose.

DATA ANALYSIS

Information about all patients undergoing EUS and EUS-FNA has been collected retrospectively since March 2003. Data recorded included the location, type, size, and endosonographic features of the lesions sampled, the number of passes made and type of needles used, sample adequacy, cytology results, final diagnoses, and procedure related complications.

A specimen was considered adequate by the cytopathologist if there was a sufficient number of representative cells from the target lesion. Samples were then interpreted as malignant, suspicious, atypical, or benign. The operating characteristics (sensitivity, specificity, positive and negative predictive values, and diagnostic accuracy) of EUS-FNA were determined by comparison with the final diagnoses of the biopsied lesions, according to surgical pathology or clinical follow up. In this latter group, lesions were considered malignant if there was clinical progression of disease.

Benign lesions were characterised by spontaneous resolution or lack of progression on imaging studies on follow up for at least one year in conjunction with continued patient well being.

In our study the sample was inadequate in 5 cases which was excluded from the study all of them were from pancreatic lesions: 3 head, one body, and one cystic lesion and this could be due to induration's, surrounding inflammation, and oedema.

The indication for EUS-FNA Biopsy in this study was for primary diagnosis mediastinal nodal and pancreatic lesions, and the pancreatic lesions were as follow 16 head, 6 body, 3 tail, 1 supra pancreatic, 1 paraumbilical, 3 cystic lesion and 2 cases diffuse inhomogeneous enlargement.

In Table 2 we see that the number of false negative in pancreatic lesion is four times that for lymph node which could be due to inflammation and edema that surrounding the pancreatic lesion that cause the sample to be inadequate.

The comparative data show that EUS –FNA biopsy of mediastinal nodal and pancreatic lesion was highly sensitive and specific as primary diagnosis procedures and to differentiate benign versus malignant lesions, Table 3.

RESULTS

The Endoscopic ultrasound guided final needle aspiration biopsy of mediastinal nodal and pancreatic lesion was highly sensitive and specific as primary diagnosis procedures and to differentiate benign versus malignant lesions with overall accuracy of 91.5% with sensitivity of 85.3% and 100% specificity.

With respective to lesion type the sensitivity, specificity, accuracy, negative predictive value and positive predictive value were 92.8%, 100%, 96%, 91.6% and 100% for mediastinal lymph node; 80%, 100%, 88%, 77.7% and 100% for pancreatic lesions respectively.

Problems still arose with false negative cytology and relatively low negative predictive value, as pancreatic tumours are frequently indurated, accompanied by inflammation, and difficult to penetrate with a conventional needle system.

Primary diagnosis of malignancy was obtained by Endoscopic Ultrasound Guided Fine-Needle Aspiration (EUS-FNA) in 49% (29/59) of patient with clinical suspicious lesions.

Inadequate specimen were obtained from 5 patients all of them from pancreatic lesions which were

Lesion	Final diagnosis	Confirmatory method
Mediastinal lymph node (n= 25)	Non small cell lung cancer 5, esophagus squamous cell carcinoma 1, metastatic adenocarcinoma 3 and squamous cell carcinoma 2, 3 lymphoma, Boop 1, sarciodosis 1, granulomatous lymphadenitis 2, benign lesion 7	Thoracotomy 3, transbronchial biopsy 4, pleural biopsy 3, gastroscopic biopsy 1, immune histochemical stain of FNA 1, clinical follow up in 13 patients
Pancreatic lesion (n= 34)	16 Adenocarcinoma, ampullary tumour 1, low grade neuroendocrine tumour 1, ductal cystoadenoma 1, well differentiated ductal carcinoma 1, tuberculosis 1, pseudocyst 1, benign lesion 12	Laparatomy 13, deudenoscopy biopsy 1, clinincal follow up 20

Table 1. Final diagnosis of the target lesion and method of confirmation.

Type of lesion	No. of true positive	No. of true negative	No. of false positive	No. of false negative
Pancreatic lesion	16	14	0	4
Mediastinal lymphonode	13	11	0	1
Total number	29	25	0	5

Table 2. Number of true positive and true negative in each lesion.

(n=64)	Sensitivity	Specificity	Positive PR	Negative PR	Accuracy
EUS-FNA 59	85.3%	100%	100%	83.3%	91.5%
Mediastinal lymphonode	92.8%	100%	100%	91.6%	96%
Pancreatic lesion	80%	100%	100%	77.7%	88%

Table 3. Comparative operating characteristics for the evaluation of mediastianl lymph node and pancreatic lesions.

excluded from the study, also three cases of pancreatic lesion the specimens were atypical cells but not confirm of malignancy which proved later by biopsy to be adenocarcinoma considered as false negative.

The accuracy and sensitivity for pancreatic lesions is lower than that for lymphnodes. The indurations and inflammatory oedema encountered in pancreatic lesions make the sample inadequate.

As a single modality, the EUS-FNA is best able to characterise pancreatic tumours, obtain tissue diagnosis, and provide accurate loco regional staging.

No complication reported in our study and this could be probably due to small sample size.

DISCUSSION

EUS-FNA is an accurate modality for the diagnosis of nodal metastases and pancreatic malignancy. EUS is superior to other imaging modalities such as CT in lymph node staging of gastrointestinal and pulmonary malignancies.[15-18] However, size and sonographic criteria cannot reliably differentiate malignant from reactive nodes and the problem of limited specificity remains. It is therefore important to obtain histological confirmation.

The majority of sampled nodes in our study population were from the mediastinum, one from celiac and one from para aortic region. We acknowledge that it is difficult to be completely certain as to the final diagnosis of lymph nodes, as comparative surgical pathology was available for only 14 patients and the clinical follow up for a relatively short period as a criterion for differentiating malignant and benign lesions is not a reliable reference standard to compare with and it has been used because of the lack of a better means of deciding. However, false positive cytology results are rare in the hands of experienced operators and where both malignant and benign nodes occur in the same patient, such errors are uncommon with careful evaluation and follow up. Within these limitations we found that, compared with size or sonographic criteria alone, EUS-FNA of lymph nodes resulted in superior specificity and accuracy for the detection of metastases disease without compromising sensitivity.[19]

The detection of mediastinal nodal metastases in non small cells lung cancer (NSCLC) is also crucial in determining treatment strategies and prognosis.[20] Posterior mediastinal nodes are readily accessible by EUS-FNA, with reported accuracy rates of 89-96% for the preoperative nodal staging of NSCLC.[21,22] In our group, EUS-FNA of mediastinal nodes in 25 patients resulted in diagnostic accuracy of 96% with 93% sensitivity, 100% specificity.These results suggest the potential to avoid more invasive staging procedures such as mediastinoscopy or thoracoscopy with substantial cost savings and little compromise in accuracy.[22,23]

In the study of Wiersema et al,[24] which evaluated EUS- FNA in 82 patients with enlarged mediastinal lymphnodes, more patients had an eventual diagnosis of benign disease (25 out of 82) compared with the current patients (11 out of 25). Therefore, in the current study, data are provided that support the accuracy of EUS-FNA predominantly in patient with no personal history of cancer with suspicious of primary diagnosis of cancer.

In selected patients with strongly suspicious of mediastinal malignancy based on computed tomography (CT) findings, we found it reasonable and in agreement with other studies,[24-27] to accept the diagnosis of malignancy obtained by EUS-FNA as final proof of advance disease.

Recent studies have shown that computed tomography scanning (CT)– negative patients, i,e patients without enlarged lymph nodes on CT, have lymph node metastases detected by EUS–FNA in 25% of cases.[28] In other words, one of four lung cancer patients without enlargement lymph nodes in the mediastinum will have their management plan changed if EUS is performed routinely as the initial invasive staging modality.

There is also growing evidence that position emission tomography (PET)–positve patient should undergo EUS-FNA due to false–positive rate of PET ranging 9-39%.[29] A recent retrospective study in 104 patients with non small cell lunge cancer (NSCLC) found EUS-FNA to be significantly more accurate (97%) than PET and CT for posterior mediastinal lymph nodes staging.[29] In another blinded comparative study in 79 patients with NSCLC between EUS-FNA, PET and CT, EUS-FNA and PET had comparable sensitivity, but EUS-FNA had superior specificity. Both methods had a sensitivity superior to that of CT.[30,31]

EUS has proved to be superior in the detection and staging of pancreatic carcinoma compared with imaging modalities such as ultrasound and CT, but cannot reliably differentiate malignant tumours from focal pancreatitis.[32,33] The results for pancreatic lesions in our study in 34 patients resulted in diagnostic accuracy of 88% with 80% sensitivity and 100% specificity confirm the enhanced specificity provided by FNA and favourably compared with other series.[34-36]

Although other investigators report less accurate results for smaller masses, we obtained equivalent operating characteristics for both small (less than 3 cm in longest axis) and large lesions. Problems still arose with false negative cytology and relatively low negative predictive value, as pancreatic tumours are frequently indurate, accompanied by inflammation, and difficult to penetrate with a conventional needle system. We would thus concur with other commentators that patients with negative EUS-FNA cytology but high clinical suspicion of resectable pancreatic malignancy should still be considered for surgery.[36]

As a single modality then, EUS-FNA is best able to characterise pancreatic tumours, obtain tissue diagnosis, and provide accurate locoregional staging that enhances diagnostic certainty and helps identify appropriate patients for resection or palliation.[36]

For the whole series, a primary diagnosis of malignancy was obtained in 49% of patients (29/59) with accuracy of 90% sensitivity 85% and 100% specificity, although a specificity of 100% should be taken cautiously because of the small number of cases in each category. Sarcoidosis or lymphoma was also identified in patients with mediastinal lymphadenopathy, as has been described in other series.[37,38] These results would suggest that EUS-FNA can be considered as a first line technique for obtaining tissue diagnoses, particularly in the evaluation of pancreatic masses and unexplained lymphadenopathy.

EUS-FNA using the linear scanner has proved to be remarkably safe in experienced hands, with reported complication rates up to 2.5%.[39,40] In the current study no complication occurred and could be due to small sample size. Due to a higher incidence of complications,[41] we recommend pre-emptive antibiotics before puncture of cystic lesions and now generally avoid aspiration of simple pancreatic pseudocysts. As most reported complications of EUS-FNA have occurred with the

radial instrument,[42] our safety profile lends weight to the recommendation that a linear echoendoscope be preferentially used for aspiration biopsies.

Although there are no specific guidelines, we recommend the presence of an experienced cytopathologist at the time of tissue sampling. Although up to eight passes were necessary for some lesions, immediate verification of sample adequacy is likely to have contributed to the very low number of insufficient specimens in our series. Conversely, an attending cytopathologist can minimise the number of passes required to make a diagnosis, save time, and likely be safer for the patient.[43-44]

CONCLUSIONS

EUS-FNA using the linear echoendoscope has proved to be safe and can readily obtain tissue specimens adequate for cytopathological diagnoses. The technique is a sensitive modality for the detection of mediastinal and coeliac nodal metastases, with improved specificity and accuracy as compared with sonographic criteria alone. As a single stage procedure it can accurately diagnose pancreatic cancer in addition to providing precise staging information. These operating characteristics have the ability to influence patient management and future studies are awaited that address the impact of EUS-FNA in clinical decision making and cost effectiveness.

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Original Article

موضوع إصيل

PERFORMANCE OF UNDERGRADUATE STUDENTS IN OSCE IN OBSTETRICS AND GYNECOLOGY IN FINAL MBBS EXAMINATION IN OMDURMAN ISLAMIC UNIVERSITY- SUDAN 2008

تقييم أداء طلاب الطب في الامتحان السريري الموضوعي OSCE في التوليد وأمراض النساء كجزء من الامتحان النهائي MBBS في جامعة أم درمان الإسلامية في السودان 2008

Taha Umbeli Ahmed, *MD;* Ali Abu Baker, *MD;* Magdi Gaafar Taha, *MD*

Khadija Abdlamola, *MD;* Suaad Alnuor, *MD*

د. طه أمبلي أحمد، د. علي أبو بكر، د. مجدي جعفر طه، د. خديجة عبد المولى، د. سعاد النور

ملخص البحث

هدف البحث: تقييم أداء طلاب الطب بجامعة أم درمان الإسلامية في الامتحان السريري الموضوعي OSCE كجزء من الامتحان النهائي MBBS في قسم التوليد وأمراض النساء كأداة موضوعية في تقييم كفاءة الطلاب العلمية.

طرق البحث: تم اختيار مجموعتين من طلاب الطب، تم تقييم المجموعة الأولى من خلال الامتحان السريري التقليدي (المكون من حالة سريرية واحدة)، بينما تم تقييم المجموعة الثانية من خلال الامتحان السريري الموضوعي OSCE. تم تحليل نتائج الامتحانين لتقييم أداء الطلاب في كل منهما ومقارنة النتائج النهائية مع نتائج الاختبار التقليدي.

النتائج: شملت الدراسة 515 طالباً أتموا الامتحان النهائي MBBS في قسم التوليد وأمراض النساء في جامعة أم درمان الإسلامية، منهم 254 خضعوا للإمتحان السريري الموضوعي OSCE، و261 آخرين خضعوا للامتحان السريري التقليدي. نجح 240 طالباً (بنسبة 94.5%) من مجموعة الامتحان السريري الموضوعي، بينما نجح 247 طالباً (بنسبة 94.6%) من مجموعة الامتحان التقليدي. بلغ المتوسط العام للدرجات في مجموعة الامتحان السريري الموضوعي 65.5±9.8، حيث تراوحت النتائج بين 84 كأعلى درجة و41 كأدنى درجة. أما في مجموعة الامتحان التقليدي فقد بلغ المتوسط العام للدرجات 63.6±9.1 حيث كانت أعلى درجة 84 وأدنى درجة 24. لم يلاحظ فارق هام في أداء الطلاب بين النموذجين الامتحانيين.

الاستنتاجات: قدمت هذه الدراسة دليلاً موضوعياً على فائدة وقابلية تطبيق الامتحان السريري الموضوعي OSCE في تقييم طلاب الطب في قسم التوليد وأمراض النساء، وهو ما يقود لاعتماد هذا الامتحان وتعميمه.

ABSTRACT

Objective: *This study was carried out to evaluate undergraduate students' performance in objective structured clinical examination (OSCE) in the final MBBS examination in obstetrics and gynecology as a useful and feasible tool for students' assessment in Omdurman Islamic University.*

*Taha Umbeli Ahmed, MBBS, MD, FCM, Professor of Obstetrics and Gynecology, Chair of post Graduate Medical Studies Board, Omdurman Islamic University, National Maternal Mortality Registrar, Sudan. E-mail: umbeli_taha@ hotmail.com.
*Ali Abu baker, MD, Associate Professor in Obstetrics and Gynecology, FoM, OIU, Sudan.
*Magdi Gaafar Taha, MD, Assistant professor in Obstetrics and Gynecology, FoM, OIU, Sudan.
*Khadija Adlalmola, MD, Assistant Professor in Obstetrics and Gynecology, FoM, OIU, Sudan.
*Suaad Alnuor, MD, Assistant Professor in Obstetrics and Gynecology, FoM, OIU, Sudan.

Methods: *Two groups of medical students were involved in this study. The first group was examined by the traditional long case clinical examination and the second was examined by objective structured clinical examination (OSCE). Analysis of examination results was used to assess students' performance in OSCE, written and their final results compared to traditional examination.*

Results: *In this study, 515 students completed their final MBBS examination in obstetrics and gynecology in OIU were involved, 254 for OSCE and 261 for clinical long case. Two hundreds and forty students (94.5%) attempted the OSCE passed the examination, and 247 students (94.6%) attempted traditional examination passed the examination. The overall mean score of the OSCE group was 65.5±9.8 SD, with 84 highest score and 41 lowest score. The overall mean score for traditional group was 63.6±9.1 SD, with highest score of 84, and lowest score of 24. There is no significant difference between students' performance in the two formats of examination.*

Conclusions: *This study provides a good evidence for the usefulness and feasibility of the OSCE in evaluation of undergraduate students in obstetrics and gynecology. Adoption of OSCE in under graduate assessment is recommended.*

INTRODUCTION

Omdurman Islamic University (OIU), was founded since 1912, however, faculty of medicine was only established in 1990 and the first intake was in 1991 and has graduated till now 14 batches. Summative assessments have been used since the graduation of the first batch, with ongoing changes in both concept and implementation. Since then, the faculty has undergone many workshops in an attempt to reform curriculum and to adopt a reliable, valid and a feasible method of examination for graduation and certification purposes. In the last two years, extensive re-evaluation of undergraduate medical education with new educational objectives and more effective standardized examination system for students' assessment in obstetrics and gynecology has been done. In the first few years of graduation, written examination in obstetrics and gynecology consisted of essay writing, short notes questions and multiple choice questions (MCQs), true and false type adopted. This had been changed with the introduction of modified structured essay questions and structured short solving problems in both obstetrics and gynecology, it is going on till now, however, MCQs were changed from true and false type to one single true answer, rather than one best answer for both obstetrics and gynecology. Clinical examination and unstructured oral examination had been going on till last batch no 14. With the introduction of problem based learning (PBL) in education, an attempt to change to an objective structured clinical examination (OSCE) started with the first group of batch 15 as a final certifying examination. The OSCE consist of a set of different stations. Each station is a task or set of tasks to be done by students in a determined time. Some stations are with an evaluator to check the tasks done by the student, and some have a simulator where the students can take history or conduct a clinical examination. Other stations are static with materials for identification or interpretation.[1] It has been extensively assessed and found to be a good tool with good validity and reliability.[1] There are no available records or data on OSCE in this university or other universities in Sudan, which necessitates documentation of such an experience.

This study was carried out to evaluate undergraduate students' performance in objective structured clinical examination (OSCE) in the final MBBS examination in obstetrics and gynecology in Omdurman Islamic university, 2008.

METHODS

Since the first batch examination in 1997, an ongoing debate has been discussed in the department of obstetrics and gynecology, regarding methods of examination and students' assessment. Unstructured oral and clinical long case in obstetrics was always under consideration, being the major determinants of failure or success in the final examination. In this study, review of students' performance during the final examination in obstetrics and gynecology was done from examination records in department of obstetrics and gynecology for four subgroups in batches, 15 and 16 in faculty of medicine in Omdurman Islamic university. No names or index

numbers were included, with particular confidentiality to candidate's performance, examiners' marking or reports. Abstract data was used for critical analysis of the examination procedures and students' performance to compare consistency of both written and OSCE performance and the final results of the examination compared to the results of students attempted the last traditional examination. Computed analysis was done using SPSS. Test of significance was done using chi square with a 95% confidence.

Moving from calendar system to semester system, now each batch is subdivided into four subgroups, rotating between departments of internal medicine, general surgery, pediatrics and obstetrics and gynecology. The subgroup varies from 60-70 students maximum. This makes revolution in assessment and shifting to OSCE easier, rather than the whole big number of students (230-240) at the end of the year. At the end of each semester, there is a full certifying examination, composed of OSCE 50%, written 40% and 10% for continuous assessment.

Two groups of medical students were involved in this study. The first group was examined by the traditional long case clinical examination and the second was examined by OSCE. In this study, 515 students completed their final MBBS examination in obstetrics and gynecology in OIU were involved, 254 for OSCE and 261 for clinical long case. The whole examination was composed of 15 different stations, categorized into three main domains. Group I, three consecutive interactive stations linking history taking from a simulator, conducting clinical examination on a real patient with prepared checklist for examiners and a structured discussion of problem identification and management (30%). Group II, other three interactive stations for counseling, history taking and reasoning to reach a diagnosis and management from a simulator, including cold and emergency cases (20%). Group III, the rest 9 static stations with surgical instruments, radiographs, specimens, investigations and scenarios with structured tasks to answer (50%). A group of 17 students rotate through the 15 clinical stations performing specific task in turn, while two members of the group at rest. The examination was well prepared; the model answers were agreed on, the scoring key was designed before giving the examination and the weights of questions were balanced to insure more marks for skills stations. The examination management was proper, the instructions were clear, there was no confusion, the layout was suitable, the space was convenient and the time was just adequate for answering each station. Before conducting the examination, all students were prepared and oriented to the examination, as well as the examiners and role players.

RESULTS

Students completed their final MBBS examination through OSCE were 254, in four subgroups, 240 students (94.5%) passed the examination, while 14 students (5.5%) failed (Table 1). The overall mean score was 65.5±9.8 SD, the highest score was 84, while lowest score was 41. The mean score for written was 65.9±11.0 SD, with highest score of 87 and lowest score of 32. In OSCE, the mean score was 65.0±10.1 SD, with 86 highest score and 38 lowest score. Students' performance

Assessment tool	Pass		Fail		Total	
	No.	%	No.	%	No.	%
Paper	230	90.6	24	9.4	254	100.0
OSCE	236	92.9	18	7.1	254	100.0
Final result	240	94.5	14	5.5	254	100.0

Table 1. Distribution of students' performance in written, OSCE and final result in the MBBS examination in obstetrics and gynecology in O.I.U 2008.

Assessment tool	Pass		Fail		Total	
	No.	%	No.	%	No.	%
OSCE	236	92.9	18	7.1	254	100.0
Clinical	246	94.3	15	5.7	261	100.0
Total	482	93.6	33	6.4	515	100.0

Table 2. Distribution of students' performance in OSCE and clinical long case in the final MBBS examination in obstetrics and gynecology in O.I.U 2008.

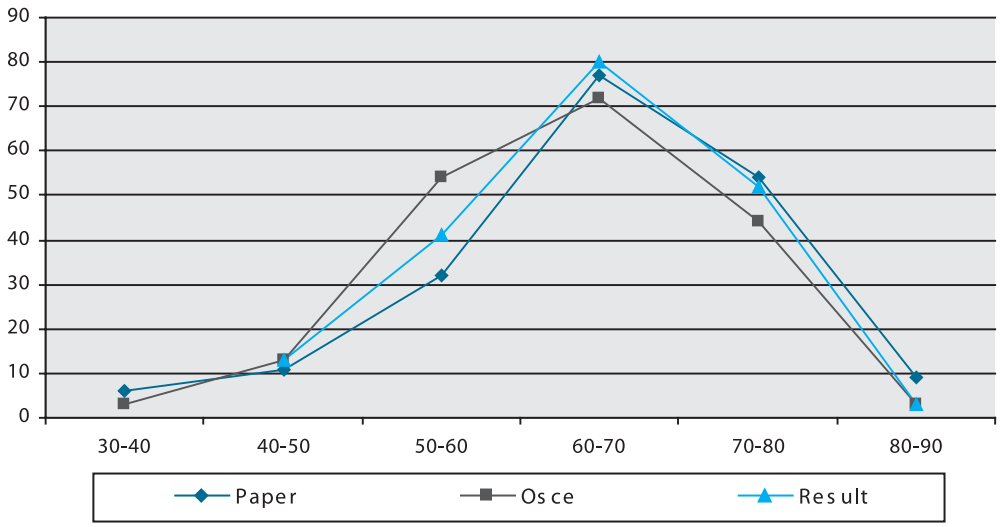

Figure 1. Students' performance in final MBBS examination in written, OSCE and their final results in obstetrics and gynecology in O.I.U 2008.

in group I OSCE was 20.6±8.4 SD, group II was 10.6± 2.8 SD and group III was 29.8±5.4 SD. Two hundreds and sixty one students completed their final examination through the conventional method (written 40%, OSCE 20% and single long obstetric case 40%), 247 students (94.6%) passed the final examination, while 14 students (5.4%) failed (Table 2). Their overall mean score was 63.6±9.1 SD, with highest score of 84 and lowest score of 24. The mean score in written was 24.7±3.9 SD with highest score of 34 and lowest of 12. The mean score in OSPE was 14.5±2.5 SD, highest score of 19 and lowest of 02. In clinical long case the mean score was 24.4±4.4 SD, highest score was 34 and lowest was 8.

Table 2 shows no discrepancy between students' erformance in paper, OSCE and final result of the examination. This table also shows the consistency between students' performance in clinical, OSCE and Final result of the examination, (Chi-square=0.385, p-value=0.535).

Figure 1 shows the consistency between students' performance in paper, clinical, OSCE and final result of the examination.

DISCUSSION

Traditional methods of assessment might be accepted if proved to be valid and reliable.[2] Known methods, such as unstructured oral or long clinical examination can give misleading impression of the student's competencies, with subsequent chances of bias.[3] Unstructured oral (viva) and clinical long case examination which have been used for long in this faculty and all other faculties of medicine in Sudan, is not without debate. It is likely to be unreliable, has no reference criteria for evaluation, no standards or structures for marking and scoring.[4] It lacks specific objectives to be assessed, may not be related to training and education of students, with different independent examiners with different schools for assessment and evaluation. It is likely to be bias, may be influenced by impression, appearance, gender and luck. It does not assess attitude, with difficulties in finding similar cases and raters for all students.[3] In this examination, it is replaced by objective structured clinical examination (OSCE). OSCE is a well established structured assessment tool which is competency-based and is a valid practical and effective mean of assessing clinical skills that are fundamental to the practice of medicine.[5] It has the advantage of preparing standardized structured checklist of tasks for each student with the same degree of difficulty for all students on the same material by the same examiner, with insuring objectivity. It is less bias, structured, easy scoring, with no inter-rater or inter-case variability.[6] The interactive stations were made to assess, communication skills, attitude, collection of informations, interpretation of results, reasoning and establishing a clinical diagnosis and planning for management. All students were assessed

on the same materials and scored by the same examiner. Time spent with patients (and simulated patients) is longer compared with the long single case; it was six out of 15 stations. Each student's final result was assessed by six independent examiners (interactive stations) compared to two or three dependent ones in the long case system examination.[7] The inclusion of interactive stations, with trained role players (simulators), is especially good for cold cases however, emergency cases were included. Checklist with key features or questions make students focus on common findings in history taking and examination with good clinical reasoning for discussion and problem management.[8] It is a comprehensive examination assessing student's skills, attitude and knowledge.

Although traditional method have been used for student's assessment for a long time and both students and examiners are aware of it, but the performance of students in OSCE is similar both in the final result and in the OSCE compared to clinical long obstetric case, which ensures that the new format is at least as good as the old.[3] Students score in OSCE is consistent with their performance in written, which may indicate the consistency of the examination; its content was relevant to training and absence of luck or bias. There is no significant discrepancy in students' performance in OSCE and written examination and between the final results of students' performance attempting the OSCE and the conventional method, (Chi square 0.535, p-value 0.385). The OSCE has the advantage of assessing different clinical domains than traditional methods,[9] while the traditional examination covers only small part of the curriculum.[10] Feasibility of the examination as a tool of assessment was demonstrated by the smooth delivery of the examination, its shorter duration, one day compared to 6-8 days in traditional examination. Number of patients needed in this examination is maximum of eight, while in traditional, a big number of patients is needed, or sometimes same patient is used more than once in different days, which affects some of the student's performance, as well as the confidence of the staff participating both as examiners or simulated patients and from majority of the students who welcome the learning experience.[11]

OSCE is expected to be cost-effective, particularly on the number of examiners and the time (hours instead of days) needed to conduct the examination. This would easily reduce the cost of the examination, especially when questions' bank is established and model answers and checklists are prepared, where the preparation and delivery of the examination will be easily conducted in a shorter time with the minimum number of examiners. Preparation of the examination is time consuming, including, setting of the examination, designing, typing, photocopying and marking of static stations. However, it is done by the staff members and can be done in ample time before conducting the examination. It may be difficult if the number of candidates is too big. This licensing form of examination can be carried out by an independent body for all medical graduates (national body board), which will unify the methods of examination, contents, standard reference and allow objective competition of different schools and help universities to develop their academic activities, curricula and methods of teaching.

CONCLUSIONS

This study provides a good evidence for the usefulness and feasibility of the OSCE in evaluation of undergraduate students in obstetrics and gynecology. Adoption of OSCE in under graduate assessment is recommended.

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Original Article

موضوع إصيل

COMPARISON BETWEEN THE CRANIOFACIAL PATTERNS OF THE SYRIAN AND THE GERMANY POPULATIONS

مقارنة المركب القحفي الوجهي بين السوريين والألمان

Luai Mahaini, *DDS*; Christof Holberg, *MD, DDS;* Ingrid Rudzki-Janson, *MD*

د. لؤي مهايني، د. كريستوف هولبرغ، د. انغريد رودزكي يانسون

ملخص البحث

هدف البحث: يهدف هذا البحث إلى تحديد المميزات النموذجية للمركب القحفي الوجهي عند المجتمع السوري ومقارنة هذه المميزات مع مثيلتها المعيارية الملاحظة لدى المجتمع الألماني.

طرق البحث: شمل البحث 247 شخصاً من كلا المجتمعين، تم ترسيم صور شعاعية جانبية لـ 46 من السوريين (27 رجلاً، 19 امرأة)، و201 من الألمان (78 رجلاً، و123 امرأة) من ميونيخ وهامبورغ. كان جميع الأشخاص في كلتا العينتين ذوو إطباق سليم صنف أول مع بروز وتغطية طبيعية، لم يخضعوا لمعالجات تقويمية سابقة، جميع الأسنان لديهم كانت موجودة باستثناء الرحى الثالثة. تم تحديد ومعالجة خصائص المركب القحفي الوجهي باستخدام تحليل ميونيخ. تم حساب القيم الوسطية، الانحراف المعياري والمجالات الملاحظة لـ 20 من المتغيرات الخطية والزاويّة. تمت مقارنة البيانات الناتجة لدى السوريين مع تلك الملاحظة لدى الألمان باستخدام اختبار Student's t-test المستقل.

النتائج: لوحظ وجود اختلافات هامة بين المجموعتين المدروستين وخاصةً في الثلث السفلي من الوجه. أظهر السوريون ميلاناً أكثر للأسفل بالنسبة لمستوى الفكين العلوي والسفلي. لوحظ أن ارتفاع القسم الأسفل من الرأس كان أطول لدى السوريين، كما أن البروز السني كان أكثر عند السوريين بالمقارنة مع الألمان.

الاستنتاجات: لوحظ وجود مميزات مختلفة للمركب القحفي الوجهي لدى السوريين، وهو ما يجب أن يوخذ بعين الاعتبار بنظرة مرجعية خلال إجراء المعالجات التقويمية لدى السوريين.

ABSTRACT

Objective: *The aim of this work is to present the established craniofacial norms typical of Syrian adults and compare said norms with accepted German standards.*

Methods: *Cephalometric radiographs of: (a) 46 Syrians (19 females and 27 males) with acceptable profiles, Angle Class I occlusion, and no previous history of orthodontic treatment; all teeth are exists except third molars, and (b) 201 German subjects (123 females and 78 males), selected from Hamburg and Munich on the basis of the same criteria. Craniofacial features were traced and analyzed by Munich Analysis. The mean value, standard deviation, and range of 20 angular and linear variables were calculated. The resulting norms for Syrians were compared with German norms using an independent Student's t-test, and cephalometric superimpositions.*

Results: *Significant differences between the two groups were seen principally in the lower third of the*

*Luai Mahaini, DDS, Dr.med. dent, Department of Orthodontics, University of Damascus, Damascus, Syria. E-mail: luai77@gmail.com.
*Christof Holberg, MD, DDS, Department of Orthodontics, University of Munich, Germany.
*Ingrid Rudzki-Janson, MD, Proffessor, Department of Orthodontics, University of Munich, Germany.

face. The Syrians showed more posteriorly inclined apical bases and a less prominent chin. Dentally, they exhibited upper and lower incisor dental protrusion resulting in an acute dental pattern and a convexity of the soft tissue profile.

Conclusions: *Typical characteristics of craniofacial morphology in Syrians have distinct cephalometric features, which should be used as a reference in the orthodontic treatment of Syrian patients.*

INTRODUCTION

Accurate diagnosis is essential for successful orthodontic treatment. Comparing diagnostic data with normal value provide a useful measure of skeletal morphology; and allow a correlation of dental and skeletal factors in malocclusion.

The evolution of cephalometric in the twentieth century is universally linked to.

Broadbent[1] and Hofrath[2] who have conducted several serial craniofacial growth studies to evaluate age-related changes and develop cephalometric norms.

Many studies looked into the craniofacial patterns in an attempt to build serial data files to define skeletal characteristics of a "balanced face" and a "good occlusion".[3,4,5,6] However, their sample population consisted mainly of white North American children and young adults. With time, it became apparent that standards for one ethnic group were not necessarily applicable to other groups. As a consequence, many other cephalometric norms were established for different ethnic groups in the same countries.[7,8]

Considering the ethnic background of patients in setting treatment objectives is an important requirement for successful orthodontic treatment, cephalometric and facial norms for different racial groups must be established.[9,10,11]

Al-Jasser[12] described the craniofacial pattern of 87 Saudi students ethnic groups with balanced harmonious faces and clinically acceptable permanent occlusion and compared it with accepted standards for the Caucasian population according to Steiner analysis. He concluded the evident that even in the Saudi ethnic groups with so-called well-balanced faces, there were some fundamental variations in the craniofacial structure of the Saudi Arab when compared with Steiner norms.

Hamdan and Rock[13] compared the cephalometric features of the Jordanian population with Eastman standards and attempted to identify the different craniofacial features which are typical of Jordanians.

Bishara[14] et al compared reputable cephalometric standards for Egyptian adolescent boys and girls with a corresponding Iowa adolescent sample. He found great similarity in the overall facial morphology among the Egyptian and Iowan populations.

Hassan[15] evaluated the cephalometric features of the Saudi population and attempted to establish cephalometric norms for Saudis living in the western region of Saudi Arabia. Hassan found that Saudis tend to have an increased ANB angle because of retrognathic mandibles and bimaxillary protrusion as compared with European-Americans.

The proposal of this study is to identify, through Munich analysis, the craniofacial norms which are typical in Syrian adults and to compare these calculated norms with the values which have been established for Germans.

Brief review of the Syrians racial ancestry: The Syrian nation belongs mainly to the wider Mediterranean racial group, which, according to Coon[16] et al and Lewis,[17] is part of the Caucasian race.

Historically, the various ethnic mixtures in Syria date back to different periods of immigration and invasion starting with the Canaanites in 3000 BC, followed by Egyptians, Assyrians, Babylonians, Persians, Greek, Romans, Arabs, Turks.

The modern Syrians essentially are of Arab ethnicity.

METHODS

In the study, lateral cephalometric radiographs were collected from 46 adult Syrians, 19 females and 27

males, with an average age of 22, showed acceptable profiles and Angle Class I occlusion, all teeth are exists except third molars and had no previous history of orthodontic treatment.

For the purpose of comparison, lateral radiographs were also collected from 201 German subjects, 123 females and 78 males, with an average age of 18, all from Hamburg and Munich, and selected on the basis of the same criteria as the Syrian group.

Cephalometric radiographs were traced at the University of Munich, according to the principles of Prof. Hasund.[7,8] Both linear and angular parameters were measured digitally through DiagnoseFix computer programs (Dr. Joerg wingberg, Diagnostik wingberg GmbH, Buxtehude, Germany). Cephalometric analysis was performed for each patient comprised 14 angular measurements, 5 linear measurements and an index.

The Munich analysis differs from other analysis in terms of landmark identifications, terminology and angle measurements (Figure 1). The lowest point on the symphyseal shadow of the mandible is Gnathion. The mandibular line (ML) in the Munich standard replaces the mandibular plane in other standards, as well as the nasal line (NL). The mandibular angle which is formed by the ramal plane and the mandibular plane is called Gn-tog-Ar and the intersection point of these two planes is called tangent gonion (tgo). The Nordeval angle is formed by the mandibular plane and the B-Pg plane which in turn describe the prominence of the chin.

OK1 represents the upper incisor and UK1 the lower incisor. The OK1-UK1 is the interincisal angle. The NB plane and the plane tangent form the soft tissue pogonion. WPG and the upper lip formed the Holdaway angle as described by Segner and Hasund.[7]

Variable	Syrians		Germans		Significance
	Mean	SD	Mean	SD	
SNA	81.8	3.9	82.4	3.5	0.07
SNB	78.4	3.3	80.8	3.4	0.00**
ANB	3.5	2.2	1.6	2.1	0.00**
SNPg	79.0	3.7	82.2	3.5	0.00**
NSBa	130.2	4.9	130.9	4.9	0.12
Gn-tgo-Ar	122.9	6.7	120.5	6.6	0.00**
N-Winkel	62.3	4.9	60.2	5.5	0.00**
Pg-NBmm	1.2	1.4	3.0	1.9	0.00**
NL-NSL	8.6	3	7.4	3.2	0.00**
ML-NSL	34.0	5.57	27.7	5.9	0.00**
ML-NL	26.0	4.18	20.1	5.8	0.00**
N-SP`	54.4	4.1	54.8	4.3	0.29
SP`-Gn	70.2	6.9	68.7	5.4	0.01**
N-SP`/SP`-Gn * 100%	77.7	6.1	80.0	6.8	0.00**
OK1-NA	22.3	6.9	21.7	6.8	0.33
OK1-NAmm	4.5	2.7	4.3	2.3	0.38
UK1-NB	27.1	5.6	22.9	6.3	0.00**
UK1-NBmm	5.8	2.2	3.8	2.3	0.00**
OK1-UK1	126.7	8.9	133.6	9.1	0.00**
H-Angle	12.4	4.3	7.7	4.5	0.00**

*p<0.01; **p<0.001 SD: Standard deviation,

Table 1. Comparison of group means between Syrian (n=46) and German (n=201) Samples.

Means and standard deviations were performed utilizing the SPSS[18] version 10 (SPSS Inc, Chicago, 1II). All results in the Table 1 were compared with the established German cephalometric norms using Student's t-test. The craniofacial morphology of Syrian and German subjects were compared using Sella and Nasion (SN) lines as reference lines.[19]

RESULTS

The difference in the craniofacial measurements between Syrian and German sample groups is presented in Table 1.

Five of the variables showed no significant differences between the two groups (SNA, NSBa, N-SP', OK1-NA, OK1-NAmm).

More facial convexity (ANB: 3.5±2.2) in Syrian sample shown, compared the German sample. In addition, a lesser chin prominence (SNPg: 79±3.7), steeper palatal and mandibular apical bases (ML-NL: 26.0±4.18), longer lower facial height (SP´-Gn: 70.2± 6.9), were found in the Syrian population. A bimaxillary dental protrusion (OK1-UK1: 126.7±8, 9) was shown in the Syrian samples. However, there was no difference in the apical base between the two samples (NSBa: 130.2±4.9) (Table 1).

The differences in craniofacial morphology are highlighted by superimposing the Syrian and German tracings on the sella and SN Lines (Figure 2).

DISCUSSION

In a study by Richardson, ''ethnic group'' was defined as a nation or population with a common bond such as a geographical boundary, a culture or language, or being racially or historically related.[20] This study is the first to compare the Syrian craniofacial morphology with German Caucasians. Because both groups belong to different races and ethnic groups, a better understanding

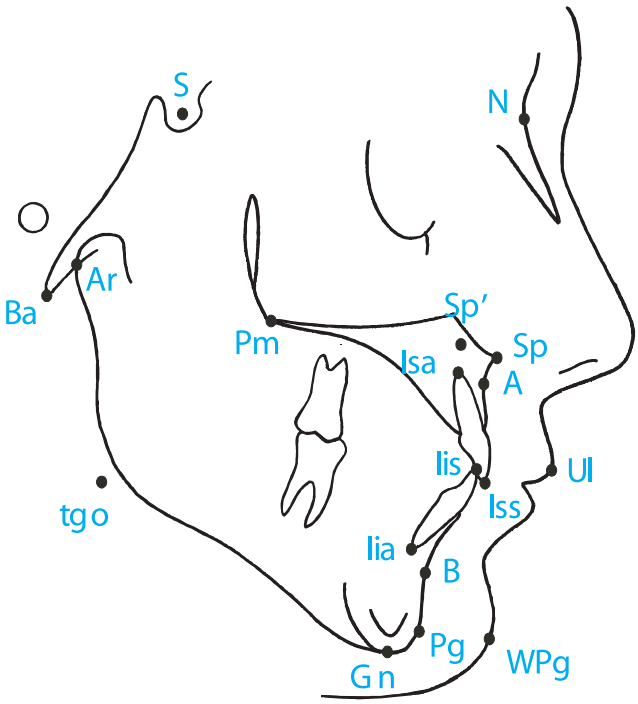

Figure 1 The different cephalometric landmarks used in the Munich analysis.

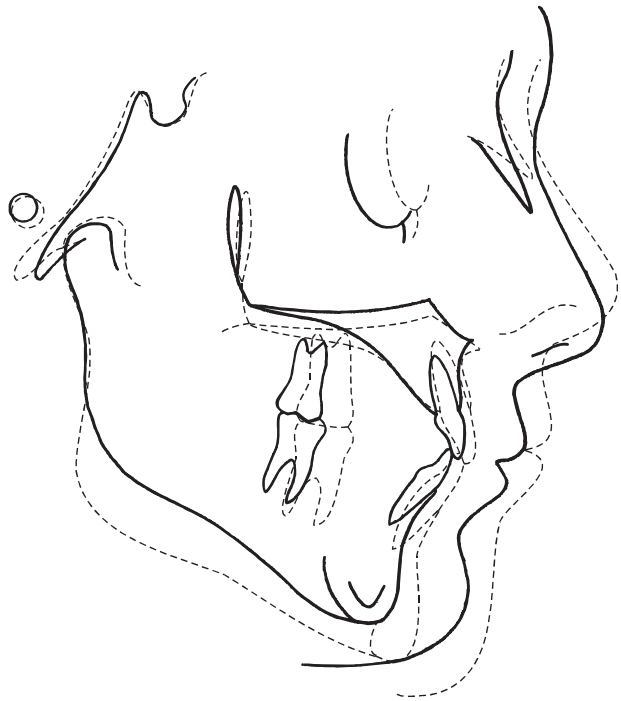

Figure 2. Cephalometric superimposition of Syrian and German

of both morphologies was achieved using statistical comparisons and cephalometric superimpositions.

The bigger ANB readings among the Syrians suggested a tendency toward lower incisal proclination and dental compensation. The smaller SN-Pg angle, Pg-NB (mm) measurement, and greater Nordeval angle showed that the Syrians have less prominent chins than the Germans, and they exhibited a larger posterior rotation of the maxilla and mandible.

The characteristic bimaxillary dental protrusion seen among other Arabian population and Asians were also observed among the Syrian samples.[12,15,21,22] They displayed more procumbent upper and lower incisors in relation to both the NA and NB planes resulting in a mean acute interincisal angle of 127º as compared with 134º found among the Germans. This present finding agrees with Enlow's reported perception of the oriental facial pattern,[23] and it agrees with studies reporting that those facial parameters closer to the dentoalveolar areas show the greatest differences among ethnic and racial groups.[24,25]

The difference in the dental relationship between the two groups reveal a bimaxillary protrusion among the Syrian samples, which in turns results in a lip protrusion. Additionally, the posteriorly inclination of the mandible and the reduced chin size participated in forming a larger Holdaway angle which gives an increased convexity facial profile in Syrians. These findings correspond with Al-Jassers study[12] on the soft tissue profile of Saudis with normal occlusion.

CONCLUSIONS

We occlude that eminent craniofacial morphology characteristics in Syrian and German subjects with neutral occlusion differ in numerous aspects. This fact should be taken into consideration during orthodontic diagnosis, keeping in mind that there are always individual variations and differences between the within each population group.

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Original Article

موضوع إصيل

TRACHEOSTOMY OPERATION ONE-YEAR PROSPECTIVE STUDY

فغر الرغامى: دراسة مستقبلية لمدة سنة

Nafi M. Shehab, *FRCS;* Mohammed Saed Sheet, *M.B.Ch.B*

د. نافع محمود شهاب، د. محمد سعيد شيت

ملخص البحث

هدف البحث: دراسة مستقبلية لحالات فغر الرغامى التي تم إجراؤها في مشفى الموصل التعليمي خلال سنة.

طرق البحث: تم تقييم 80 عملية فغر رغامى تم إجراؤها خلال الفترة من تشرين الأول 2007 وأيلول 2008. تراوحت أعمار المرضى بين 6 أشهر و86 سنة، 56 منهم ذكور (70%)، و24 إناث (30%).

النتائج: لوحظ أن انسداد الطرق التنفسية العلوية هو الاستطباب الأشيع لإجراء فغر الرغامى (60%) حيث كانت الخباثة في الحنجرة هي المسبب المسيطر لحالات الإنسداد. تم إجراء عملية فغر الرغامى بشكل انتقائي (انتخابي) عند 43 مريضاً (بنسبة 53.75%) بينما أجريت بشكل إسعافي عند 37 مريضاً (بنسبة 46.25%). تم استخدام التخدير الموضعي خلال العملية عند 43 مريضاً (53.75%) بينما استخدم التخدير العام عند 37 مريضاً (46.25%). لوحظ أن إنتان الجرح هو أكثر الاختلاطات شيوعاً حيث شكل نسبة 30.09% من مجمل الاختلاطات.

الاستنتاجات: لوحظ أن أكثر من نصف المرضى الخاضعين لعملية فغر الرغامى هم دون سن الخمسين. مثّل انسداد الطرق التنفسية العلوية السبب الأشيع لإجراء عملية الفغر يليه دعم التهوية. لوحظ أن حالات فغر الرغامى الانتقائية أكثر شيوعاً من تلك الإسعافية. لوحظ وجود فارق إحصائي هام بين حالات فغر الرغامى الانتقائية والإسعافية من حيث تطور الاختلاطات، بينما لم يكن هنالك فارق هام إحصائياً في حدوث الاختلاطات عند إجراء العملية تحت التخدير العام مقارنةً بالتخدير الموضعي. شكّل إنتان الجرح أكثر الاختلاطات شيوعاً بعد إجراء فغر الرغامى.

ABSTRACT

Objective: *Prospective study of the tracheostomy operations that have been done at Mosul Teaching Hospital, Iraq.*

Methods: *We evaluate 80 tracheostomy operations performed in the period from October 2007 to September 2008. Out of 80 patients, 56 were males (70%) and 24 were females (30%). The age of patients ranged from 6 months to 86 years.*

Results: *Upper airway obstruction was found to be the commonest indication for tracheostomy (60%) and malignancy of the larynx was the predominant single cause of the upper airway obstruction. Elective tracheostomy was performed for 43 patients (53.75%) while emergency tracheostomy for 37 patients (46.25%). Local anaesthesia was used in 43 patients (53.75%) while general anaesthesia was used in 37 patients (46.25%). The most common complication was wound infection forming (38.09%) of all complications.*

Conclusions: *More than half of the patients for whom tracheostomies done were below the age of fifty years. Upper airway obstruction is the most common indication for tracheostomy followed by assisted ventilation. Elective tracheostomy dominates over emergency one. There is a significant statistical difference between elective and emergency operations with respect to the complications. There is no significant statistical difference between local and general anaesthesia with respect to the complications. Wound infection is the most common complication encountered in this study.*

*Nafi M. Shehab, F.R.C.S, D.L.O, Assistant Professor, Head of Otolaryngology Department, College of Medicine, Mousl University, Mousl, Iraq. E-mail: Mahmood nafi@yahoo.com.

*Mohammed Saed Sheet, M.B.Ch.B, F.I.B.M.S (ENT), Al-Jamhory Teaching Hospital, Mousl, Iraq. E-mail: saedmohameed@yahoo.com.

INTRODUCTION

A tracheostomy is the surgical opening of the trachea, while tracheostomy is the creation of a stoma at the skin surface which leads into the trachea.[1] It was first described in the Rig Veda, a Hindi text, around 2000 BC as incision in the windpipe.[2] It was first depicted on Egyptian artifacts in Biblical time 3600 BC.[3] Homer around 1000 BC reported that Alexander the great saved the life of a soldier from suffocation, by making an opening in the trachea using the tip of his sword. The first tracheostomy is said to have been performed by Asclepiades of Bythinien, who lived in Rome during the last century before the Christian era 100 BC.[4] Nicholas Habicot is credited with performing the first successful paediatric tracheostomy in 1620 on a 14 year old boy who, in order to prevent theft, had attempted to swallow a bag of coins that subsequently lodged in his oesophagus and obstructed his trachea.[5]

The aim of this study is to give particular attention to the indications, timing of surgery, type of anaesthesia used, surgical techniques and the sequelae of the tracheostomy operation. This study can be used with other studies as baseline for similar studies in the future.

METHODS

A total of 80 patients (56 males and 24 females) from different age groups ranging from 6 months (patient with third-degree burn involving the face and neck) to 86 years (patient with non-Hodgkin's lymphoma of the soft palate) who underwent tracheostomy in the casualty, intensive care unit, and Department of Otolaryngology, at Mosul Teaching Hospital, Iraq, for the period from October 2007 to September 2008 were included in this prospective study. Data concerning the patient's age, sex, indication, presentation, type of anaesthesia, and surgical technique were collected in all cases. Z-test concerning 2 proportions was used. The significance used in this study was at $p \leq 0.05$. All procedures were standard tracheostomies. General anaesthesia was used in 37 (46.25%) patients, whereas local anaesthesia in 43 (53.75%) patients. Thirty one (38.75%) of the tracheostomies were performed in the accident and emergency department theatre, 25 (31.25%) were performed at the bedside, while 24 (30%) of the procedures were operated on at ENT operating theatre. Forty three (53.75%) of the procedures were considered elective, while 37 (46.25%) were considered emergency type. Exposure of trachea was obtained through vertical midline skin incision in 68 (85%) patients, while 12 (15%) patients had a transverse skin incision, after that the strap muscles were separated in the midline down to the thyroid isthmus. Division and ligation of the thyroid isthmus was needed in 15 (18.75%) patients. Tracheal window was fashioned in 67 (83.75%) patients, a vertical slit in 12 (15%) patients while a Björk flap was made in the anterior tracheal wall in 1 (1.25%) patient.

RESULTS

More than half of the patients (56.25%) for whom tracheostomy done were below the age of fifty years. The peak age incidence was in the seventh decade of life. Out of 80 patients, 56 were males (70%), while 24 were females (30%). The main indications of tracheostomy were to relieve upper airway obstruction (60%), followed by assisted ventilation (31.25%), then bronchial toilet (5%) and the least was as part of other procedures (3.75%), (Table 1).

Indication	No.	%
Upper airway obstruction	48	60.00
Assisted ventilation	25	31.25
Bronchial toilet	4	5.00
Part of other procedures	3	3.75
Total	80	100.00

Table 1. Indications of tracheostomy.

Malignancy was the major cause of upper airway obstruction (58.30%), (Table 2). The total number of malignancies was 28 (58.30%). Carcinoma of the larynx occurred in 20 patients (71.43%), whereas other types of tumours occurred in 8 patients (28.57%), (Table 3).

Cause	No.	%
Malignancy	28	58.30
Trauma	14	29.20
Infection	3	6.25
Others (central stridor "2 cases" and congenital laryngeal web " 1 case")	3	6.25
Total	48	100.00

Table 2. Causes of upper airway obstruction.

Type of tumor	No.	%
Laryngeal cancer	20	71.43
Thyroid cancer	5	17.86
Hypopharyngeal tumour	2	7.14
Soft palate tumour	1	3.57
Total	28	100.00

Table 3. Types of tumours causing upper airway obstruction.

Bullet injury was the most common cause of trauma that lead to upper airway obstruction. It was the cause in 11 patients (78.57%), (Table 4).

Type of trauma	No.	%
Bullet	11	78.57
Burn	2	14.29
Motor vehicle accidents (MVA)	1	7.14
Total	14	100.00

Table 4. Types of trauma that lead to upper airway obstruction.

Head injury including bullets and motor vehicle accidents "MVA" was the major cause that needed assisted ventilation (52%), followed by respiratory failure which occurred in 7 patients (28%), (Table 5).

About the causes of bronchial toilet that needed tracheostomy, bronchopneumonia was seen in 3 patients (75%) and lung abscess was seen in 1 patient (25%).

The procedures that needed tracheostomy prior to surgery were seen in Table 6.

Cause	No.	%
Head injuries (bullet and MVA)	13	52.00
Respiratory failure	7	28.00
Brain tumours and others	5	20.00
Total	25	100.00

Table 5. Causes of prolonged assisted ventilation.

Type of Procedure	No.	%
Craniofacial resection	1	33.33
Resection of squamous cell carcinoma of the floor of the mouth	1	33.33
Intermaxillary fixation (IMF)	1	33.33
Total	3	100.00

Table 6. Procedures that needed tracheostomy prior to surgery.

Regarding the timing of tracheostomy, 43 (53.75%) of the procedures were considered elective, while 37 (46.25%) were considered emergency. Thirty one (38.75%) of the tracheostomies were performed in the accident and emergency department, 25 (31.25%) of them were performed at bedside, while 24 (30%) of the procedures were performed in the ENT operating theatre. Regarding anaesthesia, forty three (53.75%) patients had local anaesthesia, while 37 patients (46.25%) had general anaesthesia.

In 68 patients (85%) vertical skin incisions were performed while transverse skin incisions were performed in 12 (15%) patients. The thyroid isthmus was mobilized in 65 (81.25%) patients, whereas in 15 (18.75%) patients the thyroid isthmus was cut. In 67 (83.75%) patients circular incision was performed in the anterior tracheal wall, in 12 patients (15%) vertical incision was used, while Björk flap was performed in only one patient (1.25%).

Complications developed in 21 (26.25%) patients. The overall complications were 31, (Table 7).

Statistical analysis (using Z-test of two proportions was used) shows that there was a significant difference

Complication	No.	%
Wound infection	8	25.80
Tube obstruction (scabs and crusts)	6	19.35
Chest infection	4	12.90
Tracheal stenosis	4	12.90
Surgical emphysema	2	6.45
Decannulation problems	2	6.45
Haemorrhage	1	3.23
Cardiac arrest	1	3.23
Tube dislodgement/displacement	1	3.23
Tracheo-esophageal fistula	1	3.23
Dysphagia	1	3.23
Total	31	100.00

Table 7. Complications of tracheostomy.

(p=0.032) between elective and emergency operation in respect to the complications, while there was no significant difference (p=0.247) between local and general anaesthesia in respect to complications.

DISCUSSION

In this study tracheostomy was performed nearly for all age groups, but slightly more than half of the patients (56.25%) were below fifty years. This may be explained by the fact that high percentage of patients involved in this study were suffering from variable types of trauma to head, neck and chest, because of security instability and increase in shrapnel injuries from bombed cars during the period of this study. Seventy percent (70%) of patients were males. This is in contrast with El-Mustafa[6] who reported that (71%) of patients were females due to ingestion of hair-dyes containing paraphenylene diamine. In our study the male predominance may be explained by the fact that males are outdoor workers which in turn expose them more to the shrapnel injuries.

Relief of upper airway obstruction was the main indication for tracheostomy (60%). This is in agreement with El-Mustafa,[6] Cinnamond, 1988[7]; and Mukherjee, 1979[8] who found that angioneurotic oedema (42%), subglottic stenosis (49%), and juvenile recurrent multiple papillomatosis of the larynx (36.70%) are the commonest causes respectively. It is worthy to notice that carcinoma of the larynx is still the most common individual indication for performing tracheostomy in this study (20 out of total 80 patients). Fifty three percent (53.75%) of the procedures were considered as elective. This is in agreement with Waldron, et al, 1990[9] who reported that seventy four percent (74.70%) of tracheostomies were elective and (25.30%) were emergency. Many patients in this study suffered from multiple injuries to head, neck and chest following shrapnel of bombed cars, bullets and mines during the period of this study. In those patients tracheostomy is usually done electively few days after injury to replace intubation.

About anaesthesia, fifty three percent (53.75%) of the procedures were done under local anaesthesia and (46.25%) of them were done under general anaesthesia. This is in contrast with Waldron et al, 1990[9] who found that general endotracheal anaesthesia was used in (88.30%) of the elective cases and (48%) of the emergencies. We believe that many patients had bullet and shrapnel injuries in the head and neck region that require intubation for a period then after that tracheostomy is fashioned under local anaesthesia. Sixty eight (85%) of patients had vertical skin incision and 12 (15%) of patients had transverse incision. Excellent rapid exposure is obtained through a vertical midline incision. A horizontal incision gives a better cosmetic result. Under emergency circumstances, cosmesis becomes a lesser consideration when rapid control of the airway is required.[10]

In this study the thyroid isthmus was mobilized in 65 patients (81.25%), while 15 patients (18.75%) required division and ligation, but this is in contrast with Calhoun et al, 1994[11] who reported that 79.30% of thyroid isthmus were divided, while 20.60% of them were mobilized. Calhoun et al, found that electrocautery division of the thyroid isthmus during tracheostomy is faster and as safe as other techniques with respect to blood loss, perioperative complications, and airway outcome.

In 67 patients (83.75%) a tracheal window was

fashioned after circular incision with excision of tracheal cartilage, while in 12 patients (15%) a vertical slit was performed. Waldron et al, 1990,[9] also found that tracheal window was fashioned at the level of the third or fourth tracheal ring in (97.30%) of patients and vertical slit only in (2.60%).

Complications were observed in 21 patients (26.25%). Similarly, Waldron et al, 1990[9] found that the overall complications of his study were (25.30%). On the contrary the complications of Chew and Cantrell, 1972[12] study were (15.80%). The complications observed in this study were mainly seen in the emergency procedures (37.84%) which resulted in relatively high overall complications rate, whereas the complication rate for elective procedures was lower (16.28%). This difference between complications rate of elective and emergency procedures was found to be statistically significant by Z-test. This result is in contrast with Waldron et al, 1990[9] who reported no significant difference between the elective (24.10%) and emergency (28.90%) procedures with respect to complications. The high rate of complications noticed in this study could be explained by the fact that many tracheostomies were done to relieve upper airway obstruction caused by advanced disease and severe trauma caused by car explosions and blast-mines.

The complication rate of operations performed under general anaesthesia were (32.43%) and (20.93%) of those performed under local anaesthesia. In comparison, the complication rate were (24.30) and (28.60) respectivly according to Waldron et al, 1990.[9] Nevertheless, in this study no significant difference was found between tracheostomies performed under general anaesthesia and those performed under local anaesthesia as far as complications are concerned (Statistically compared by Z-test).

The most common complication in this study was wound infection (10%) while the commonest one found by Chew and Cantrell, 1972[12] was haemorrhage followed by infections. The mortality rate due to tracheostomy itself was (0%) in this study. This is in agreement with Zeitouni et al, 1994[13] who reported a (0%) mortality in their series. In contrast, Chew and Cantrell, 1972[12] found that the mortality rate was (1.60%) and the two most common causes of death were haemorrhage and displaced tube respectively.

CONCLUSIONS

More than half of the patients were below the age of fifty years, and upper airway obstruction is the most common indication for tracheostomy followed by assisted ventilation. Elective tracheostomy dominates over emergency one. There is a significant statistical difference between elective and emergency operations with respect to the complications but there is no significant statistical difference between local and general anaesthesia with respect to the complications. Wound infection is the most common complication encountered in this study.

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Original Article

موضوع إصيل

COMPARISON BETWEEN THE DIAGNOSTIC VALUES OF SERUM INFLAMMATORY MARKERS, INTERLEUKIN-6 AND C-REACTIVE PROTEIN IN DETECTION THE SEVERITY OF ACUTE APPENDICITIS

المقارنة بين القيم التشخيصية للمشعرات المصلية الإلتهابية (الإنترلوكين-6 والبروتين التفاعلي C) في تحديد شدة إلتهاب الزائدة الحاد

Imad Wajeh Al-Shahwany, *CABS;* Zuhair Bashir Kamal, *CABS*

Laith Naief Hindoosh, *CABS*

د. عماد وجيه الشهواني، د. زهير بشير كمال، د. ليث نايف هندوش

ملخص البحث

هدف البحث: يهدف هذا البحث إلى مقارنة القيمة التشخيصية للمشعرات الالتهابية: البروتين التفاعلي C والإنترلوكين-6 (IL-6) في تحديد شدة التهاب الزائدة الحاد.

طرق البحث: تم إجراء دراسة مستقبلية امتدت من شهر كانون الأول 2008 وحتى شهر آذار لعام 2009 حيث شملت المرضى الذين خضعوا لعملية استئصال زائدة في قسم الجراحة في مشفى الكندي التعليمي في بغداد. تم الحصول على عينات مصلية قبل الجراحة لتقييم مستويات البروتين التفاعلي C والإنترلوكين-6. وبناءً على الدلائل العيانية الملاحظة خلال الجراحة والفحص النسيجي للعينات المستأصلة تم تقسيم المرضى إلى ثلاث مجموعات: المجموعة الأولى: حالة عدم وجود التهاب في الزائدة (أي الزائدة طبيعية)، المجموعة الثانية: حالة التهاب زائدة حاد غير مختلط (التهاب نزلي، قيحي)، والمجموعة الثالثة: حالة التهاب زائدة حاد مع اختلاطات (تنخر أو انثقاب). تم إجراء ربط إحصائي بين القيم الملاحظة مخبرياً للمشعرات الالتهابية وبين النتائج الملاحظة نسيجياً.

النتائج: شملت هذه الدراسة 50 مريضاً، 28 ذكور (56%) و22 إناث (44%)، بمتوسط أعمار 23 سنة (تراوح بين 7-50 سنة). من خلال الفحص العياني خلال الجراحة والفحص النسيجي للعينات المستأصلة فقد توضع 7 مرضى في المجموعة الأولى (14%)، و29 في المجموعة الثانية (58%)، و14 في المجموعة الثالثة (28%). أعطت نتائج الإنترلوكين-6 والبروتين التفاعلي C نتائج سلبية حقيقية في 6% و10% على الترتيب، بينما أعطت نتائج إيجابية حقيقية في 82% و32% على الترتيب، ونتائج سلبية كاذبة في 4% و54% على الترتيب، ونتائج إيجابية كاذبة في 8% و4% على الترتيب. ومن هنا يمكن من خلال هذه الدراسة القول بأن حساسية، نوعية، ودقة القيم المصلية للإنترلوكين-6 هي 95.34%، 42.85% و88% على الترتيب، أما بالنسبة للبروتين التفاعلي C فإنها 37.20%، 77.42% و62% على الترتيب.

الاستنتاجات: يجب التعامل مع النتائج المخبرية بشكل متآزر مع التقييم السريري. يمكن لقيم البروتين التفاعلي C والإنترلوكين-6 -عند استخدامهما بشكل مدروس- أن تعطي الجراحين معلومات متتمة إضافية تفيد في تحديد مدى الحاجة لإجراء جراحة عاجلة.

ABSTRACT

Objective: *The aim of this study was to compare the diagnostic values of serum inflammatory markers, C-reactive protein (CRP) and interleukin-6 (IL-6) in detection the severity of acute appendicitis.*

Methods: *This is a prospective study from December 2008 to March 2009 included all patients who had appendectomy in Department of Surgery, Al-Kindy*

*Imad Wajeh Al-Shahwany, CABS, Assisstant Professor, Department of Surgery, Al-Kanady College, Baghdad University, Al-Jadyria, P. O. Box 47188, Baghdad, Iraq. E-mail: imadlshahwany@yahoo.com.
*Zuhair Bashir Kamal, CABS, Assisstant Professor, Department of Surgery, Al-Kanady College, Baghdad University, Baghdad, Iraq.
*Laith Naief Hindoosh, CABS, Assisstant Professor, Department of Surgery, Al-Kanady College, Baghdad University, Baghdad, Iraq.

Teaching Hospital - Baghdad/Iraq. Serum for estimating levels of C-reactive protein (CRP) and interleukin-6 (IL-6) was taken pre-operatively. Depending on the macroscopic evidence during the operation and the histopathological examination of the specimens, the patients were separated into 3 groups, group one with negative appendectomy (normal appendix), group two with non-complicated acute appendicitis (catarrhal, suppurative), and group three with complicated acute appendicitis (perforated, gangrenous). The histopathological results were correlated with CRP and IL-6 values statistically.

Results: *A total number of 50 patients were included in this study, 28 males (56%) and 22 females (44%). The mean age was 23 years (ranged from 7 to 50). On the macroscopic evidence during the operation and the histopathological examination of the specimen, there were 7 patients (14%) in group one, 29 patients (58%) in group two, and 14 patients (28%) in group three. Serum IL-6 and CRP values gave true negative results in 6% and 10% respectively, true positive results in 82% and 32% respectively, false negative results in 4% and 54% respectively, and false positive results in 8% and 4% respectively. Therefore, in the present study the sensitivity, specificity, and accuracy of serum IL-6 were calculated as 95.34%, 42.85%, and 88% respectively, and the sensitivity, specificity, and accuracy of CRP values were calculated as 37.20%, 77.42%, and 62% respectively.*

Conclusions: *Laboratory results should be considered to be integrated within the clinical assessment. If used critically, CRP and IL-6 can provide surgeons with complementary information in discerning the necessity for urgent operation.*

INTRODUCTION

Appendicitis remains one of the most common acute surgical diseases.[1,2] The average rate of normal appendectomy is 16 percent, with female comprising 68 percent of those patients found to have inflamed appendix at exploration.[1] Diagnosis of acute appendicitis in young children and elderly is more difficult than in adults, and also perforation rate is higher.[1] In elderly the causes of abdominal emergency are greater and differential diagnosis is more problematic.[3] Acute appendicitis is a clinical diagnosis and no laboratory or radiological tests are 100% accurate.[4] The methods for diagnosing acute appendicitis have significantly not changed over the past few decades. Clinical examination and laboratory parameters, such as white blood cell and differential counts (percentage of neutrophil granulocytes) were the only diagnostic tools for many years. Perforation rate was high, as well as the number of negative appendectomies. Mild leukocytosis, ranging from 10.000 to 18.000 is usually present in patients with acute, uncomplicated appendicitis and is often accompanied by a moderate polymorphonuclear predominance.[1-5] The sensitivity of leukocytosis is 52% to 96% and sensitivity of shift to left is from 39% to 96%.[6] Following the introduction of ultrasonography in the last two decades and computed tomography (CT) in the last decade, the rate of negative appendectomies and perforations has decreased.

Improving the diagnosis of acute appendicitis in order to prevent unnecessary surgery is crucial. To reduce the incidence of normal appendectomies, many studies have been published on quantitative analysis of C-reactive protein (CRP). CRP is an acute phase protein that is produced in the liver. Normal serum concentration is less than 10 mg/l.[7] 6-12 hours after infection or trauma, the increase of acute phase protein in liver the CRP is more important in clinical practice.[8] Production of CRP is controlled by interleukin-6 (IL-6)[9] and in few minutes increases from 10 to 1000 times.[8,9] A raised serum CRP concentration is one measure of the combination of events known as the 'acute phase response'. In its fully developed form, the acute phase response is illness - fever, malaise, anorexia, leukocytosis, negative nitrogen balance - which forms the cardinal response of the body to infection and trauma, and may be the result of many immunological reactions and inflammatory processes. The increases in these acute phase proteins are accompanied by transient, modest reductions in the concentrations of the negative acute phase proteins, of which albumin and transferrin are typical examples.[10-12]

The liver is stimulated to produce CRP by soluble cytokines. CRP produced notably by cells of the macrophage series, but also by other leukocytes and

other tissues such as endothelium. The cytokines IL-1, IL-6, and IL-11; tumor necrosis factor-a (TNF-a); and transforming growth factor-3, (TGF-3) all have a role in stimulating transcription of the genes controlling hepatic acute phase production.[13-18] The generation of these cytokines by macrophages is an extremely early event in the response to infection or trauma, for example one of the strongest stimuli to macrophage production is bacterial lipopolysaccharide. Serum CRP levels begin to rise within 6-12 hours of acute tissue inflammation. A rapid assay is widely available. Several prospective studies have shown that in adults who have had symptoms for longer than 24 hours, a normal CRP level has a negative predictive value of approximately 100% for appendicitis. Specificity is 50-87% in several series. By measuring CRP in the plasma, the clinician has access to direct evidence that the body has started to mobilise its nonspecific defences.[19]

Appendicitis is a common surgical problem associated with a systemic inflammatory response. Interleukin-6 is a mediator of the inflammatory response and an early marker of tissue damage. It plays a role in the induction of an acute-phase response, and it has anti inflammatory activity. The concentrations of IL-6 in blood increase after surgery in correlation with the degree of surgical stress. It has been reported that post operative serum levels of IL-6 are higher for open colectomy and cholecystectomy than for laparoscopic surgery.[19]

To reduce the incidence of normal appendectomies, many studies have been published on quantitative analysis of interleukin-6 (IL-6).[19]

METHODS

This is a prospective study of 50 appendectomised patients in Department of Surgery, Al-Kindy Teaching Hospital, Baghdad/Iraq, performed between December 2008 and March 2009. Clinical signs of acute appendicitis were determined by the surgeon and the duration of symptoms were documented on admission. All the patients were operated on for a clinical suspicion of acute appendicitis.

Blood samples for quantitative serum CRP and IL-6 measurement were collected preoperatively from all the patients. C-reactive protein concentration was quantified by a routine immunochemical turbidimetric assay the cut off value was taken as 1.7 mg/dl. The results were given as CRP positive or negative.

Sample for analysis of IL-6 was centrifuged; the serum was separated and stored frozen at -20^{o}C for later IL-6 measurements. The serum IL-6 concentration was measured by IL-6 enzyme linked immunosorbent assay (ELISA). An IL-6 concentration of 12.5 pg/ml was taken as the reference.

The final diagnosis of the specimens was established by histopathological examination. Removed appendices were fixed in formalin and analyzed histopathologically. The patients were grouped, according to the macroscopic evidence during operation and the histopathology reports, into three groups; group one with negative appendectomy (normal appendix), group two with non-complicated acute appendicitis (catarrhal, suppurative), and group three with complicated acute appendicitis (perforated, gangrenous).

Statistical analysis: We compared CRP values and serum IL-6 concentrations with the histopathological results to detect the sensitivity, specificity, and accuracy of CRP and IL-6 in diagnosis of acute appendicitis. The calculation was done as follows:

Sensitivity = TP/TP+FN
Specificity = TN/TN+FP
Accuracy = TP+TN/TP+TN+FP+FN
(FP=false positive, TP=true positive, TN=true negative, FN=false negative).

Statistical analysis of CRP and IL-6 values for p-value and odds ratio were estimated in relation to histopathology.

RESULTS

Fifty patients with the preliminary diagnosis of acute appendicitis were recruited in this study within the period of December 2008 to March 2009. The mean age was 23 year (ranged from 7 to 50). Table 1 shows the distribution of the age groups of the patients.

There were 28 males (56%) and 22 females (44%) with a male to female ratio 1.27:1, this ratio changed from 0.4:1 in group one to 1.2:1 in group two and 1.8:1 in group three.

Age groups	No. of patients	Percentage
0-9 year	5	10%
10-19 year	15	30%
20-29 year	22	44%
30-39 year	4	8%
40-49 year	3	6%
50-above	1	2%
Total	50	100%

Table1. Patients distribution according to age groups.

Depending on the macroscopic evidence of the appendix during the operation and later on the histopathological examination of the specimens, the patients were separated into three groups: group one of patients who did not have acute appendicitis as the cause for acute abdomen (normal appendix) 7 patients (14%), group two who had non-complicated acute appendicitis (catarrhal, suppurative) 29 patients (58%), and group three with complicated appendicitis (perforated, gangrenous) 14 patients (28%).

Table 2 shows the patients characteristics in relation to histopathological findings. Table 3 shows the statistical analysis (p-values and odds ratio) of CRP results in relation to histopathology.

The C-reactive protein values, when compared to histopathology, gave true positive (TP) results in 16 patients (32%), true negative results (TN) in 5 patients (10%), false positive results (FP) in 2 patients (4%), and false negative results (FN) in 27 patients (54%). Statistically, the sensitivity of CRP values was calculated as 37.20%, specificity as 77.42%, and the accuracy as 62%, (Table 4 and Figure 1).

IL-6 levels, when compared to histopathology, gave true positive (TP) results in 41 patients (82%), true negative results (TN) in 3 patients (6%), false positive results (FP) in 4 patients (8%), and false negative results (FN) in 2 patients (4%). Statistically, the sensitivity of IL-6 values was calculated as 95.34%, specificity as 42.85%, and the accuracy as 88%, (Table 4 and Figure 1).

Results	IL-6		CRP	
	No.	%	No.	%
True positive (TP)	41	82%	16	32%
True negative (TN)	3	6%	5	10%
False positive (FP)	4	8%	2	4%
False negative (FN)	2	4%	27	54%
Total	50	100%	50	100%

Table 4. TP, TN, FP, and FN results of IL-6 and CRP.

The median IL-6 levels (pg/ml) assay in group one with normal appendix was 24.7376 pg/ml, in group two with non-complicated acute appendicitis was 53.7294

	Histopathological groups			Total
	Group 1: Normal appendix	Group 2: Non-complicated appendicitis	Group 3: Complicated appendicitis	
Number (%)	7 (14%)	29 (58%)	14 (28%)	50 (100%)
Male	2 (4%)	16 (32%)	9 (18%)	27 (54%)
Female	5 (10%)	13 (26%)	5 (10%)	23 (46%)
Male/female ratio (1.27:1)	0.4:1	1.2:1	1.8:1	
Mean age (23 years)	30.75 years	20.66 years	25 years	

Table 2. Patients characteristics in relation to histopathology results.

pg/ml, and in group three with complicated acute appendicitis was 84.2622 pg/ml, all the above results were statistically significant (p-value<0.001). Table 5 shows the statistical analysis (p-values and odds ratio of median IL-6 (pg/ml) in relation to histopathology.

Figure 2 demonstrates the median IL-6 levels according to histopathology.

The accuracy of CRP and IL-6 in relation to histopathology is illustrated in Figure 3.

	Histopathological groups		
	Group 1: Normal appendix	Group 2: Non-complicated appendicitis	Group 3: Complicated appendicitis
CRP +ve/-ve values	5/7	5/29	12/14
p-value	<0.001	0.067	<0.001
Odds ratio (range)	0.10 (0.04-0.26)	1.68 (0.93-3.05)	0.16 (0.08-0.33)

Table 3. Statistical values of CPR results in relation to histopathology results.

	Histopathological groups		
	Group 1: Normal appendix	Group 2: Non-complicated appendicitis	Group 3: Complicated appendicitis
Median IL-6 (pg/ml)	24.7376	53.7294	84.2622
p-value	<0.001	<0.001	<0.001
Odds ratio (range)	0.07 (0.02-0.27)	0.14 (0.06-0.36)	0.04 (0.01-0.12)

Table 5. Statistical values of median IL-6 (pg/ml) in relation to histopathology results.

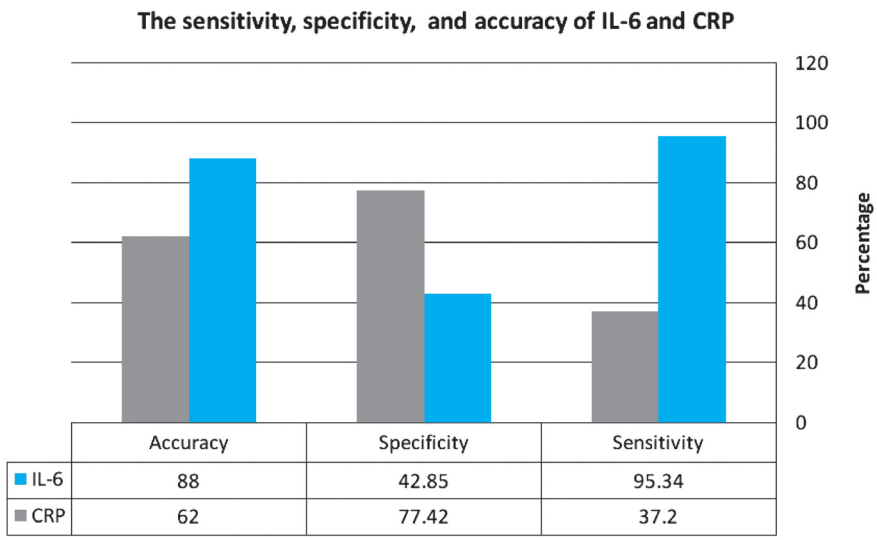

Figure 1. Sensitivity, specificity, and accuracy of CRP values as compared to IL-6.

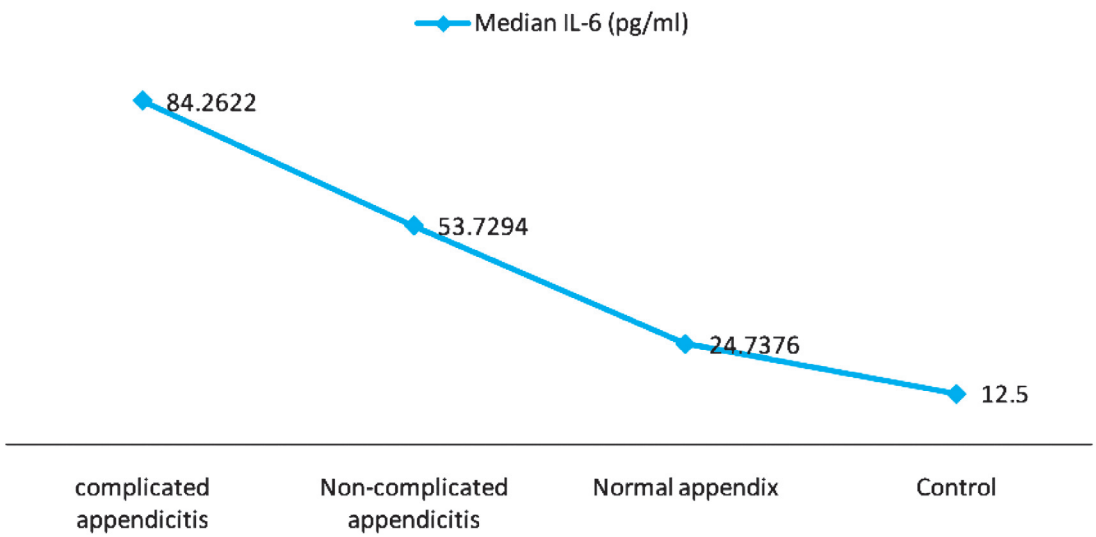

Figure 2. The median IL-6 levels according to histopathology results.

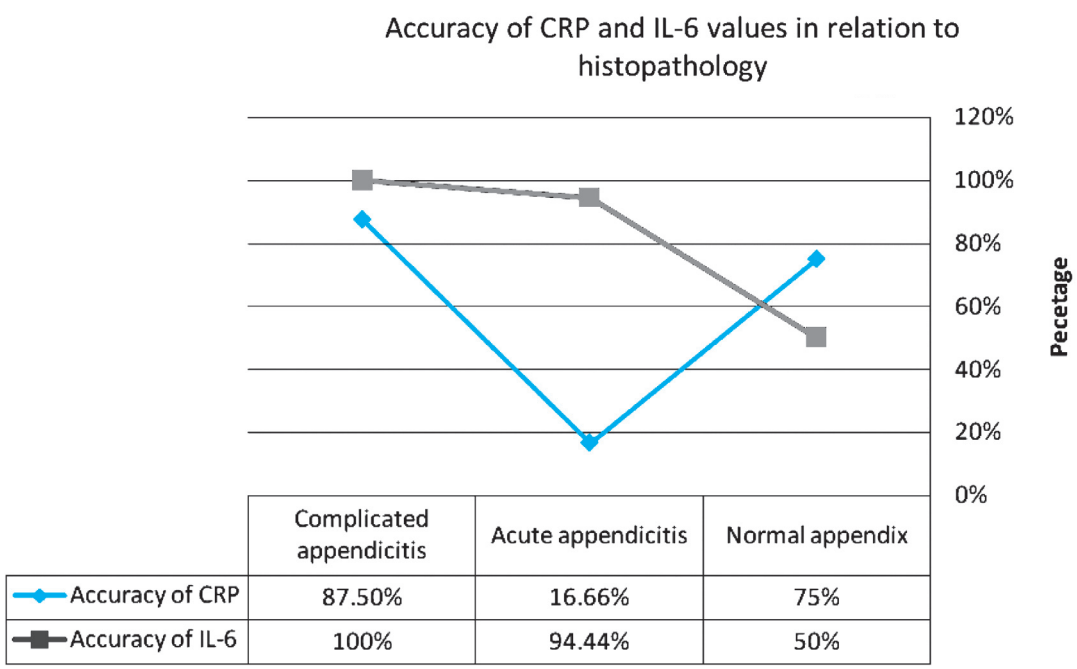

Figure 3. Accuracy of CRP and IL-6 in relation to histopathology results.

DISCUSSION

The mean age of our patients in this study was 23 year, and the main age group was 20-29 years (44%), this is comparable to median age and age groups in other studies, Fernando A et al,[20] Alshahwany I,[21] Goodwin AT et al,[22] and Khan MN et al.[23]

The overall male to female ratio in our results was 1.27:1, though this ratio changed to 0.4:1 in the group one with normal appendix. This can be explained by the fact that about one third of females operated upon for acute appendicitis turned to have gynaecological disorders with a normal appendix,[21] this increases the females numbers having normal appendices relative to males and therefore changing the ratio.

Seven of our patients (14%) had normal appendices macroscopically on exploration and later on proved by histopathology; this rate of negative appendectomy is an acceptable result as the rate of normal appendices removed is still about 15-30%.[24] We believe that the origin of pain in these cases could be related to gynaecological disorders, mesenteric lymphadenitis, meckel's diverticulitis, regional ileitis, peritonitis of different causes, urinary tract infection, ureteric colic, gastroenteritis or other medical causes.

Despite the diagnosis of acute appendicitis will probably remain a clinical one, additional diagnostic tools (CRP, IL-6) are welcomed. In our study, CRP accuracy values were helpful in predicting patients with normal appendices (accuracy 75%) but it were useless in predicting the diagnosis of non-complicated appendicitis (accuracy 16.66%), we don't have a logical explanation for this high false negative and low accuracy results, on the other hand CRP values gave a good correlation to the diagnosis of complicated appendicitis (accuracy 87.5%), this finding is statistically significant (p-value<0.005).

There is a wide range of CPR sensitivity and specificity in different studies. In a meta-analysis, CRP has been shown to have a medium sensitivity (53–88%) and specificity (46–82%) for appendicitis.[25] In another double blind study, Asfar and Coworkers[26] reported sensitivity and specificity of CRP as 86.6% and 93.6% respectively. They concluded that normal CRP value probably indicates a normal non inflamed appendix. Erkassap S et al,[27] in a study on 102 patients reported that sensitivity and specificity of CRP were 96% and 78% respectively. It has been demonstrated, that in patients whose symptoms had lasted more than 24 hours CRP had a high sensitivity.[28] In our study the sensitivity of CRP values was calculated as 37.20%, specificity as 77.42% which are comparable to the results of Rothenburger M et al[29] (sensitivity 32% and specificity 93%).

The diagnostic accuracy of IL-6 in adult population is controversial. In our study it was 88%, but there are several studies in adults were unable to confirm the usefulness of IL-6 for diagnosing acute appendicitis,[30,31] while others, including studies in children, found it a useful marker.[32-34] The differences in the studies could be attributed to different study populations and designs.

In our study, serum IL-6 concentrations gave 50% true negative results in group one of patients with histopathologically confirmed normal appendices. The median IL-6 level in this group was 24.7376 pg/ml, which is considered double the control laboratory value (12.5 pg/ml), this true negative result can be explained by the probability that these patients had inflammatory process elsewhere in the body which stimulates the production of IL-6, such as gastroenteritis, urinary tract infection, mesenteric lymphadenitis, or any other hidden inflammatory process, thus, a mild elevated serum IL-6 concentration is of poor specificity to the early process of acute appendicitis, and serum IL-6 concentration is not useful for preventing negative laparotomies in the majority of patients with right iliac fossa pain.

In group two, the median IL-6 concentration was more than four times the laboratory control value (53.7294 pg/ml) and it correlate well (accuracy rate was 94.44%) with the histopathology results of non-complicated acute appendicitis.

In group three, with complicated appendicitis, the median IL-6 concentration was more than six times (84.2622 pg/ml) the laboratory control value and it gave 100% accuracy rate and correlated very well with complicated appendicitis, thus high levels of serum IL-6

concentrations are very useful to discriminate between uncomplicated and complicated appendicitis.

Gurleyik G et al[30] and Paajanen H et al[32] found that preoperative high increased IL-6 concentrations were clearly correlated with perforation and poor postoperative conditions in adults. Our data agree with the results of these studies.

CONCLUSIONS

The data in this study would support the conclusion that elevated levels of inflammatory markers IL-6 and CRP are supportive of the diagnosis of appendicitis during the assessment of patients felt clinically to require laparotomy for acute appendicitis.

Serum IL-6 level is a good laboratory marker of acute appendicitis with particular reference to the discrimination between uncomplicated and complicated appendicitis.

The values of CRP are of low diagnostic accuracy and have only a supportive role in diagnosing acute appendicitis. In addition CRP results do not distinguish between various types of bacterial infection.

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Original Article

موضوع إصيل

SEASONAL VARIATION OF HBA1C IN CHILDREN AND ADOLESCENTS WITH TYPE 1 DIABETES

التغيرات الموسمية في مستوى الخضاب السكري HbA1c عند الأطفال والمُراهقين المصابين بالنمط الأول للداء السكّريِ

Ghada F. Naji, *CABP*

د. غادة فايق ناجي

ملخص البحث

خلفية البحث: إن وجود تغير في مستويات الخضاب السكري HbA1c بين الفصول يؤدي إلى تأثر عملية تقييم مرضى السكري باستخدام مستويات الخضاب السكري وذلك عند عدم أخذ هذه التغيرات الفصلية بعين الاعتبار. يهدف هذا البحث إلى تحديد مدى وجود تغيرات فصلية في تراكيز الخضاب السكري وجرعة الأنسولين العلاجية المستخدمة وذلك عند الأطفال والمراهقين المصابين بالنمط الأول للداء السكري.

طرق البحث: شملت هذه الدراسة المقطعية العرضية 118 من الأطفال والمراهقين المصابين بالداء السكري من النمط الأول (45 ذكراً و73 أنثى)، أعمارهم دون 18 سنة (بمعدل 10.03±3.9 سنة) من المراجعين لمركز السكري في كلية الطب بجامعة المستنصرية ببغداد. بدأت الحالة لدى هؤلاء المرضى قبل عام 2005 وقد تمت متابعة حالتهم لمدة سنة بين عامي 2005 و2006. تم تسجيل مستويات الخضاب السكري HbA1c، جرعات الأنسولين، حدوث نقص سكر شديد متكرر، وذلك وفق زيارات محددة بشكل فصلي دون وجود توقيتات محددة. تم حساب متوسط القيم الفصلية للخضاب السكري HbA1c (حسب العمر والجنس) وجرعات الأنسولين لكل فصل خلال مدة المتابعة الممتدة لسنة.

النتائج: لوحظ أدنى متوسط لقيم الخضاب السكري HbA1c خلال فصل الصيف (7.85±2.28%)، بينما لوحظ أعلى متوسط خلال فصل الشتاء (9.04±2.38%) مع وجود فارق هام إحصائياً بين الفصول (p=0.0001)، ولكن مع عدم وجود تغيرات فصلية هامة في جرعات الأنسولين. لوحظ أن متوسط القيم الفصلية للخضاب السكري في كلا الجنسين أعلى في الشتاء وأخفض في الصيف مع وجود فروقات فصلية هامة عند الذكور (p=0.023) وعند الإناث (p=0.035)، مع وجود فروقات فصلية عالية الأهمية (p=0.001) لدى مجموعة المرضى بأعمار دون 13 سنة. لوحظ أن النسبة الأكبر من القياسات المعبرة عن ضبط سيء للسكر (مستوى HbA1c<8.0%) وهي 62.1% كانت في فصل الشتاء، بينما كانت النسبة الأقل خلال الصيف (34.6%).

الإستنتاجات: لوحظ وجود تغيرات فصلية في تراكيز الخضاب السكري HbA1c حيث تبلغ مستوياتها الدنيا خلال فصل الصيف وهو ما يعكس تحسن الضبط الإستقلابي عند الأطفال السكريين خلال هذا الفصل. يمكن لهذه التأثيرات أن تعزى غالباً إلى الطقس البارد، حيث سجلت أعلى مستويات للخضاب السكري خلال فصل الشتاء وأدناها خلال الصيف. إن هذه التغيرات الفصلية في تراكيز الخضاب السكري قد سجلت في كلا الجنسين وعند المرضى دون 13 سنة بشكل خاص، ولم يكن لها علاقة بحدوث نقص السكر الشديد المتكرر.

ABSTRACT

Objective: *If HbA1c levels vary by season, evaluation of quality of care using HbA1c levels may be biased without adequately considering the seasonal effect on HbA1c. The aim of this study is to measure whether there is a seasonal variation in glycosylated hemoglobin concentrations and insulin dose used in children and adolescents with type 1 diabetes.*

Ghada F. Naji, CABP, Al-Mustansiriya College of Medicine, Pediatrics Department, Iraq. E mail: ghada_faik@yahoo.com.

Methods: *A total of 118 children and adolescents with type 1 diabetes mellitus (45 boys and 73 girls), <18 years of age (10.03±3.9), attending the Iraqi Diabetic Center in Al-Mustansiriya Medical College, Baghdad, were included in this cross-sectional study, with diabetes onset before 2005, they were studied over one year in a cohort 2005-2006. HbA1c, insulin dose and recurrent severe hypoglycemia, were registered at visits scheduled quarterly, but not standardized in time. Seasonal mean values were calculated for HbA1c (defined by age, sex) and insulin dose for each season over one year.*

Results: *Lower mean HbA1c was seen in summer (7.85±2.28%), and higher in winter (9.04±2.38%), with a highly significant seasonal variation (p=0.0001), but there was no significant seasonal variation in insulin dose. Seasonal mean values for HbA1c in both sexes were higher in winter and lower in summer, with a significant seasonal variation in males (p=0.023), and females (p=0.035), and a highly significant seasonal variation (p= 0.001) in patients <13 years only. Highest percent (62.1%) of measurements which indicated poor control (HbA1c>8.0%) was in winter, but the lowest (34.6%) was in summer.*

Conclusions: *A seasonal variation in the concentration of the HbA1c was observed with the lowest level in summer consistent with an improved metabolic control in the diabetic children during the summer period. These effects are likely attributable to cold climate, with higher HbA1c levels in winter and lower levels in summer. A seasonal pattern of HbA1c appeared in both sexes and in patients <13 years old. Such variation wasn't related to recurrent severe hypoglycemia.*

INTRODUCTION

Glycosylated hemoglobin (HbA1c) should be measured every 3 months. Normal values vary among laboratories but are usually below 6.2%.[1]

Variation of HbA1c have been reported before, in type 1diabetes children from Scandinavia.[2]

Numerous human physiologic and pathophysiologic processes have been reported to vary seasonally in both healthy volunteers and people with chronic diseases. some of these include cortisol, epinephrine, clotting factors, glucose, insulin, lipid, and blood pressure level and heart rate variability. Many of these markers are implicated in the causal pathway for the development of common diseases.[3]

Hemoglobin A1c (HbA1c) is associated with the risk of developing complications for one of the most common chronic diseases: diabetes, fluctuations in HbA1c levels may reflect fluctuations in risk for events.[3]

There have been reports of seasonal variation of HbA1c levels among patients with either type 1 or type 2 diabetes.[3]

Previous reports have suggested dietary, exercise and metabolic factors as the likely explanation for these variations with the higher winter levels being the result of increase winter diet, less exercise and even perhaps the influence of ambient temperature.[2,4,5]

The aim of this study was to investigate whether there is a seasonal variation in glycosylated hemoglobin concentrations and insulin dose used in children and adolescents with type 1 diabetes, and whether such variation is related to recurrent severe hypoglycemia and whether these fluctuations differed by age and sex.

METHODS

A total of 118 children and adolescents with type 1 diabetes mellitus (45 boys and 73 girls), less than 18 years of age (10.03±3.9), attending the Iraqi Diabetic Center in Al-Mustansiriya Medical College, Baghdad, were included in this cross-sectional study, with diabetes onset before 2005, they were studied over one year in a cohort 2005-2006.

HbA1c, insulin dose and recurrent severe hypoglycemia (more than two episodes of hypoglycemia with altered level of consciousness, uncontrolled shaking, inconsolable crying, disorientation, or seizures requiring assistance to treat in the studying year) were registered at visits scheduled quarterly, but not standardised in time. Seasonal mean values were calculated for HbA1c (defined by age, sex) and insulin dose for each season over one year.

In practice, the total cases were grouped according to their age as those <13 years, and those >13 years.

In our study HbA1c was determined in human whole blood by the VARIANTTM hemoglobin A1c program using ion-exchange high performance liquid chromatography (HPLC) [non-diabetic level <6%].[6]

Following the American and British Associations for insulin-dependent diabetes mellitus (IDDM), used a classification of "good ", "moderate", or "poor" control of illness: (a) good control [HbA1c < or =7%]; (b) moderate control [7% < HbA1c < or =8%]; and (c) poor control (HbA1c >8%].[7]

All results were expressed in numbers and percentages, the statistical analysis was done using t-test, ANOVA test and Chi-square and p-value <0.05 was considered as significant and below 0.01 was considered highly significant.

RESULTS

Among the total number of 118 children and adolescents with type 1 diabetes mellitus (DM1), 45 (38.1%) were boys and 73 (61.9%) were girls. The total cases were grouped according to their age as those <13 years (73.7%, n=87), and those >13 years (26.3%, n=31).

Lower mean HbA1c was seen in summer (7.85±2.28%), and higher in winter (9.04±2.38%), mean difference between winter and summer (higher and lower seasonal measurements of HbA1c) was 1.184 with 95% confidence interval (95% C.I.) of 0.577-1.791 which was highly significant (p<0.0001) as shown in Table 1.

Season	Mean±SD	Range
Spring	8.31±2.11	4.0-14.1
Summer	7.85±2.28	4.4-14.7
Autumn	8.16±2.11	4.8-14.2
Winter	9.04±2.38	5.0-14.6
Total	8.35±2.26	4.0-14.7
p-value	0.0001 (Highly significant)	

Table 1. The mean haemoglobin A1c (%) measurements by season.

Table 2 shows that seasonal mean insulin dose was 0.81±0.42, 0.72±0.36, 0.79±0.35, and 0.77±0.37 unit/kg/day in spring, summer, autumn, and winter respectively with no significant variation (p=0.326).

Season	Insulin dose (unit/kg/day)	
	Mean±SD	Range
Spring	0.81±0.42	0.2-2.4
Summer	0.72±0.36	0.2-2.0
Autumn	0.79±0.35	0.2-2.0
Winter	0.77±0.37	0.2-1.9
Total	0.77±0.37	0.2-2.4
p-value	0.326 (Not significant)	

Table 2. The mean insulin dose measurements by season.

Seasonal mean values for HbA1c in both sexes were higher in winter (9.31±2.57% for males, 8.85±2.25% for females) and lower in summer (7.86±2.27% for males,7.85±2.30% for females), with a significant seasonal variation in males (p=0.023), and females (p=0.035) as shown in Table 3.

Season	Females	Males
	Mean±SD	Mean±SD
Spring	8.18±1.85	8.54±2.49
Summer	7.85±2.30	7.86±2.27
Autumn	8.14±1.97	8.19±2.29
Winter	8.85±2.25	9.31±2.57
Total*	8.27±2.12	8.48±2.44
p-value	0.035 (Significant)	0.023 (Significant)

*Difference in HbA1c between males and females was not significant (p=0.321).

Table 3. The mean haemoglobin A1c (%) measurements by season according to sex.

Table 4 shows that the seasonal mean values for HbA1c in patients <13 years were higher in winter (8.83±2.35%) and lower in summer (7.73±1.99%), with a highly significant seasonal variation (p=0.001), also for those >13 years the mean HbA1c concentrations were higher in winter (9.54±2.42%) and lower in summer (8.06+2.72%), but with no significant seasonal variation (p=0.069). Difference in HbA1c between the two age groups [8.08±2.07% for those under 13

years and 8.93±2.52% for those >13 years] was highly significant (p=0.0001).

Season	<13 years	≥13 years
	Mean±SD	Mean±SD
Spring	7.97±1.91	9.07±2.35
Summer	7.73±1.99	8.06±2.72
Autumn	7.79±1.80	9.04±2.41
Winter	8.83±2.35	9.54±2.42
Total*	8.08±2.07	8.93±2.52
p-value	0.001 (Highly significant)	0.069 (Not significant)

*Difference in HbA1c between the two age groups (<13 years and >13 years) was highly significant (p=0.0001).

Table 4. The mean haemoglobin A1c (%) measurements by season according to age groups (<13 years and >13 years).

Seasonal variation regarding metabolic control confirmed that the highest percent (62.1%) of measurements which indicated poor control was in winter, but the lowest (34.6%) was in summer, whereas highest percent (47.7%) of those with good control were in summer and only (21%) were in winter, there was a highly significant seasonal variation defined by metabolic control (p<0.0001), as shown in Table 5.

Patients not reporting recurrent severe hypoglycemia (85.6%) had a seasonal variation in HbA1c (p=0.0001), while patients reporting recurrent severe hypoglycemia (14.4%) did not vary in HbA1c (p=0.171), as shown in Table 6.

Table 7 shows that there was no significant seasonal variation in insulin dose regarding hypoglycemia.

Season	Hypoglycemia	No hypoglycemia
	Mean±SD	Mean±SD
Spring	8.73±1.72	8.26±2.15
Summer	9.38±2.75	7.68±2.16
Autumn	7.84±2.21	8.23±2.09
Winter	9.20±2.45	9.01±2.39
Total*	8.61±2.33	8.31±2.25
p-value	0.171 (Not significant)	0.0001 (Highly significant)

*Difference in HbA1c between those with hypoglycemia or those without was not significant (p=0.328).

Table 6. The mean haemoglobin A1c (%) measurements by season according to occurrence of recurrent severe hypoglycemia.

Season	Hypoglycemia	No hypoglycemia
	Mean±SD	Mean±SD
Spring	0.90±0.26	0.72±0.38
Summer	0.76±0.11	0.71±0.33
Autumn	0.69±0.31	0.74±0.30
Winter	0.86±0.32	0.68±0.34
Total*	0.78±0.29	0.72±0.34
p-value	0.261 (Not Significant)	0.757 (Not Significant)

*Difference in insulin between those with hypoglycemia or those without was not significant (p=0.265).

Table 7. The mean insulin (units) measurements by season according to occurrence of recurrent severe hypoglycemia.

Season	Control of diabetes*		
	Good	Moderate	Poor
	(HbA1c≤7.0)	(7.0<HbA1c≤8.0)	(HbA1c>8.0)
Spring	29.0%	18.0%	53.0%
Summer	47.7%	17.8%	34.6%
Autumn	35.5%	21.3%	43.3%
Winter	21.0%	16.9%	62.1%
Total	33.1%	18.6%	48.3%

*p<0.0001 (Highly significant association)

Table 5. The control of diabetes mellitus using HbA1c (%) measurements by season.

There was a significant association between recurrent severe hypoglycemia and the season of its occurrence ($p<0.042$), with highest percentage of patients not reporting hypoglycemia (91.9%) was in summer, but those reporting hypoglycemia (23.0%) were in autumn.

DISCUSSION

We demonstrated that HbA1c levels among 118 patients with type 1 diabetes fluctuated seasonally, with higher HbA1c was seen in winter, and lower in summer.[2,8,9]

The highest percent (62.1%) of values that indicated poor control was in winter, whereas the highest percent (47.7%) of those with good control were in summer, a finding in agreement with other study.[8]

Same seasonal trends existed for the individuals with HbA1c values greater than 8.0 percent (poor control).[3] There were higher percentage of HbA1c tests exceeding the 8.0 percent threshold in winter (62.1%) than in summer (34.6%) .

Both sexes developed similar seasonal variation of mean HbA1c value with a peak in winter and a nadir in summer.[3]

HbA1c values from prepubertal age group (<13 years) followed a similar seasonal variation, while HbA1c concentrations in a pubertal age group (≥13 years) showed no significant seasonal variation, these findings differ from that reported by Elizabeth A, et al., as they found an unexpected rise in HbA1c levels during the summer, with a return to baseline when school resumed in adolescents with type 1 diabetes due to lack of consistency in summer routines compared with school days which was associated with a worsening in metabolic control during the summer months.[10]

Patients not reporting recurrent severe hypoglycemia had seasonal variation in HbA1c, while patients reporting recurrent severe hypoglycemia did not vary in HbA1c, these findings in contrast to that reported by Nordfeldt S et al, who found that only patients reporting severe hypoglycemia had a seasonal variation in HbA1c.[8] This means that our study shows no relation between seasonal variation in HbA1c and recurrent severe hypoglycemia, but the result is consistent with reports of seasonal variation in blood glucose, with the highest levels occurring in winter, as well as reports that suggest an internal milieu of increased counterinsulin action in winter due to seasonality in counterinsulin hormones.[11]

Also a highest percentage of patients not reporting frequent sever hypoglycemia was in summer was point toward good metabolic control.

CONCLUSIONS & RECOMMENDATIONS

A seasonal variation in the concentration of the HbA1c was observed with the lowest level in summer consistent with an improved metabolic control in the diabetic children during the summer period. These effects are likely attributable to cold climate, with higher HbA1c levels in winter and lower levels in summer. Those with HbA1c values of greater than 8.0 percent following a similar pattern. A seasonal pattern appeared in both sexes and in patients <13 years only.

Such variation was'nt related to recurrent severe hypoglycemia.

Self-control and adjustment of insulin doses to seasonal change need to be improved.

These findings may have implications for health services research in quality-of-care assessment, epidemiologic studies investigating study population trends and risk factors, and clinical trials or programs evaluations examining the effects of treatments or interventions.

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Original Article

موضوع إصيل

MEATAL ULCERATIONS IN NEONATES

تقرحات صماخ الإحليل عند حديثي الولادة

Numan Nafie Hameed, *M.R.C.P. CH, F.I.B.M.S, D.C.H*

د. نعمان نافع حميد

ملخص البحث

هدف البحث: يعتبر تقرح صماخ الإحليل أحد المشاكل الحميدة التي تحدث عادةً إثر ختان حديثي الولادة. يمكن لهذه الحالة أن تسبب تضيقاً في صماخ الإحليل أو اختلاطات أخرى، يمكن الوقاية من هذه الاختلاطات من خلال اتخاذ تدابير العناية الجيدة بعد الختان. تهدف هذه الدراسة إلى تحديد الأسباب الكامنة وراء تضيق صماخ الإحليل عند الذكور حديثي الولادة.

طرق البحث: شملت هذه الدراسة المقطعية 400 من الذكور حديثي الولادة المراجعين لمركز المستنصرية للرعاية الصحية الأولية في بغداد لهدف أخذ لقاح BCG خلال الفترة من 1 آذار وحتى 10 تموز لعام 2007. تم استجواب الوالدين لمرة واحدة من خلال نموذج استبياني خاص بالدراسة، كما خضع حديثو الولادة للفحص السريري لكشف وجود تقرح في صماخ الإحليل عند أول زيارة لهم لأخذ اللقاح الذي يعطى في يوم واحد من الأسبوع.

النتائج: لوحظ وجود تقرحات في صماخ الإحليل عند 24 من أصل 400 من حديثي الولادة (بنسبة 6%). لوحظ أن 36 من حديثي الولادة قد تم ختانهم (9%)، تطور لدى 15 منهم حالة تقرح في صماخ الإحليل (41.66%). تم إجراء الختان على يد طبيب عند 25 من حديثي الولادة (69.45%) تطور لدى 9 منهم تقرح في صماخ الإحليل (36%)، بينما تم إجراء الختان بيد مضمد عند 11 من حديثي الولادة (30.55%) تطور لدى 6 منهم تقرح في صماخ الإحليل (54.54%). لوحظ ازدياد حدوث تقرح صماخ الإحليل من 2.47% عند غير المختونين إلى 41.66% عند المختونين، (X^2=115.436، p<0.01). لوحظ استخدام الأمهات لحفاضات النايلون عند 296 من أصل 400 من حديثي الولادة (74%)، تطور لدى 20 منهم (6.75%) تقرح في صماخ الإحليل، وذلك بالمقارنة مع استخدام قطعة قماشية أو الحفاضات القماشية عند 104 من أصل 400 من حديثي الولادة تطور لدى 4 منهم (3.84%) تقرح في صماخ الإحليل.

الاستنتاجات: لوحظ أن الختان هو السبب الأكثر أهمية لتقرح صماخ الإحليل عند الذكور حديثي الولادة، وخاصةً عند عدم إجرائه بيد خبيرة. كما أن استخدام حفاضات النايلون أو قطعة من النايلون وعدم استخدام الكريمات هي من العوامل التي تسرع تطور تقرحات صماخ الإحليل. توصي هذه الدراسة بإجراء الختان بيد طبيب مدرب مع اتخاذ تدابير العناية اللازمة بعد إجرائه، مع ضرورة إجراء دراسات أوسع تتضمن حجم عينة أكبر وفترة متابعة أطول للمرضى بعد إجراء الختان وذلك لإعطاء توصية أكثر رصانة حول ختان الذكور حديثي الولادة.

ABSTRACT

Objective: *Meatal ulceration (MU) is a benign problem, commonly fellow neonatal circumcision. It can lead to meatal stenosis and other complications, which can be prevented by proper post circumcision care. This study aims to disclose the different causes of MU in male neonates.*

Methods: *Four hundred male neonates attended to Al-Mustansyria primary health care centre PHC/Baghdad for BCG vaccination, were studied cross-sectionally over 5 months period from the 1st of March to 10th of July, 2007. The parents of neonates were interviewed once by questionnaire and neonates were examined for meatal ulceration as they came for BCG vaccination which was done once weekly in this PHC .*

*Numan Nafie Hameed, M.R.C.P. CH - F.I.B.M.S - D.C.H, Assistant Professor, Department of Pediatrics, College of Medicine, Baghdad University, Children Welfare Teaching Hospital, Medical City Complex, Baghdad, Iraq. E-mail: numanalhamdani@yahoo.com.

Results: *Meatal ulcerations were found in 24 out of 400 neonates (6%). Thirty six neonates were circumcised (9%), 15 of them develop meatal ulceration (41.66%). Twenty-five neonates were circumcised by doctors (69.45%), nine of them with meatal ulceration (36%), while 11/36 neonates were circumcised by dresser (30.55%), six of them develop meatal ulceration (54.54%). The incidence of meatal ulceration increase from (2.47%) in non circumcised neonates to (41.66%) in circumcised neonates, (X^2=115.436, p<0.01). It was found that 296/400 neonates (74%) used nylon diaper, 20 (6.75%) of them had MU compared to 104/400 used a piece of cloth or cloth diaper, 4 of them develop MU (3.84%).*

Conclusions: *Circumcision was found to be the most important cause of MU in male neonates, especially when the circumcision was done by not well trained person. Using nylon diaper or a piece of nylon, and not applying cream or cover are accelerating factors for the development of MU. So I recommend that circumcision of neonates to be done by well trained doctor and followed by proper post circumcision care. Also recommend to do further studies of larger sample size and to follow them for long-term bad consequences to give firmer recommendation regarding neonatal circumcision.*

INTRODUCTION

The meatus is the interface between the urethra and the external surface of the penis, where the urine exits. The intact human penis has a moveable foreskin that covers and protects the glans of penis from injury, discomfort, and unintended stimulation.[1,2,3]

Meatal ulceration (MU) is a common and in most cases a benign problem. It occurs commonly following neonatal circumcision, thus it is a peculiar complication of circumcision.[4,5]

Meatitis is inflammation of the urethral opening from loss of protective foreskin, which can lead to ulceration and meatal stenosis. MU can be caused by meatitis and/or abrasions from dry nappies soaked with urine and faeces.[6]

Male circumcision continues to excite a good deal of interest and discussion within the medical and lay press. For Muslims as for Jewish community, religious law sanctions only male circumcision. Muslims consider male circumcision important mainly for hygiene purposes especially for prayers. It is usually performed within few weeks of birth.[7-9] The foreskin secretions have an immunological function which may help to protect against infection.[10]

Following circumcision, there will be ulceration, crusting, narrowing of the urinary passages and nearly always accompanied by painful urination, often with distended bladder, and occasionally by hemorrhage. Circumcision can also increase the risk of penile inflammation. MU can cause urinary retention and if untreated to kidney failure. Thus careful meatal examination is indicated in any circumcised boy with abdominal or urinary complaints.[11-14] The glans of circumcised neonates does not develop a thicker keratinization layer.[15]

MU and poor cosmetic results have been reported following the plastibell device of circumcision.[16] The ammoniacal diaper has traditionally been blamed for meatal problems in circumcised penis.[17]

The clearest medical benefit of circumcision is the relative reduction of UTI especially in early infancy.[18-21]

The treatment of MU is naturally directed to the lesion itself and to the prophylaxis and treatment of ammoniacal diaper. Frequent nappy changing is advised, together with the liberal use of barrier creams, to minimize the risk of ammoniacal dermatitis and the associated risk of meatal stenosis and ulceration during wound healing.[7]

This study aims to disclose the different causes of MU in male neonate.

METHODS

A cross-sectional study of 400 male neonates (less than 28 days old), attended to Al-Mustansyria primary health care center for BCG vaccinations (BCG was done

in this PHC only once weekly) over 5 months period from the 1st March to 10th of July 2007. The investigator himself interview the parents of neonates by special questionnaire form, fellowed by physical examination of genital area to look for meatal ulcerations as single examination.

The questionnaire designed to collect relevant information regarding history including the age of neonates in days and the age of circumcision if done, what are the types of covering of the napkin area?, what are the types of powder and creams that are used for napkin area?, circumcision of neonate done or not?, what are the causes (indications) of circumcision and who did the circumcision whether a doctor, dresser or others?.

The physical examination of genital areas included the presence of meatal ulceration and/or other associated abnormalities (No.1 MU: the redness of the areas near meatus only (tip of glans) or No.2 MU: meatal ulceration with redness of the area near the meatus and redness of other areas (scrotum and its surrounding). Neonates who had clear contact or candida dermatitis were excluded from the study.

Statistical analysis was done by Graph pad Instat 3 for windows (1999 Graph pad Soft, Inc., San Diego CA). Descriptive statistics were reported. Chi-squared test and Fisher's exact test were used to compare the proportions between groups. Statistical significance was set when $p<0.01$.

RESULTS

This study included 400 male neonates (less than 28 days old), 24 neonates (6%) had MU, and 376 neonates (94%) were normal (without MU).

There were 4 age groups of male neonates. The largest number and percentage of neonates fall in 15-21 days old group,133/400 neonates (33.25%), and the least age group is <7 days were 28/400 neonates (7%), (Table 1).

There were 2 types of the lesions of the meatus : No.1 MU was found in 13/24 neonates (54.16%), of them 12 neonates were circumcised and one not circumcised (he had hypospadias). No.2 MU was found in 11/24 neonates (45.84%), of them 3 were circumcised and 8 were not circumcised (one of them had hypospadias).

Age (days)	With MU	Without MU	Total	%
<7	-	28	28	7
8-14	3	105	108	27
15-21	11	122	133	33.25
22-28	10	121	131	32.75
Total	24	376	400	100

$X^2 = 16.305$, $p<0.0$

Table 1. Descriptive statistics of age of neonates studied.

Of those who had MU, 4/24 neonates (16.68%) in 8-14 days range, of them 3 had no.1 MU and one had no.2 MU. In 15-21 days range, 13/24 (54.16%) had MU, of them 5 had no.1 MU and 8 had no.2 MU. In 22-28 days range, 7/24 neonates (29.16%) had MU, of them 5 had no.1 MU and 2 had no.2 MU. No MU cases found in neonates of < 7 days.

Thirty six (9%) neonates were circumcised, 21 of them (58.34%) were normal (without MU), while 15 of them (41.66%) had MU (12 neonates with no.1 MU and 3 with no.2 MU). These results were statistically significant ($X^2 = 115.436$, $p<0.01$).

Most of neonates were circumcised at 8-14 days old in 22/36 neonates (61.11%) and most cases of MU occurred in circumcised neonates at age group of 15-21 days in 10/15 neonates (66.66%), (Table 2).

Age (days)	Cicumcised		Meatal ulceration	
	No.	%	No.	%
<7	2	5.56	-	-
8-14	22	61.11	3	20
15-21	10	27.77	10	66.66
22-28	2	5.56	2	13.34
Total	36	100	15	100

Table 2. Distribution of age of circumcision in relation to MU.

There were 6 types of covering of napkin areas in our community:1- Nylon diaper alone, 2- swaddling with piece of nylon, 3- swaddling with nylon diaper, 4- swaddling with piece of cloth, 5- cloth diaper made at home, 6- market (prepared) cloth diaper, (Table 3). The most common types of covering found in this study were using swaddle with nylon diaper in 149 neonates (37.25%), and nylon diaper alone in 136 neonates (34%), while those using Swaddle with piece of nylon in11 neonates (2.75%), (Table 3).

Twenty out of 296 neonates (6.75%) with MU were using nylon diaper alone or a swaddle with piece of nylon or swaddle with nylon diaper, while those who were using piece of cloth or cloth diaper with MU were 4/104 neonates (3.84%), (Table 3). About 217/400 (54.25%) neonates used market powder, and 13/400 (3.25%) neonates not used anything, (Table 4).

Twenty five out of 36 neonates (69.45%) were circumcised by doctors, 9 (36%) had MU, while 11/36 neonates (30.55%) were circumcised by nurses, 6 (54.54%) had MU, (X^2=3.852, p<0.05).

The main indication for circumcision in this study was neonates' parents thoughts that there will be rapid healing of circumcision in this age group in 17/36 neonates (47.2%), less pain sensation in 9 (25%), less movement and religious indications in 3 (8.3%) for each, and social and medical in 2 (5.55%) for each. Urinary tract infection (medical indication) was indication for circumcision in 2 neonates, and the decision for circumcision was determined by families' doctors.

Types of covering	Normal (No.)	MU (No.)	Total	%
1- Nylon diaper alone	128	8	136	34
2- Swaddling clothes with piece of nylon	9	2	11	2.75
3- Swaddling with nylon diaper	139	10	149	37.25
4- Swaddling with piece of cloth	74	3	77	19.25
5- Cloth diaper made at home	23	1	24	6
6- Market (prepared) cloth diaper	3	-	3	0.75
Total	376	24	400	100

X^2=16.930, p<0.05

Table 3. Descriptive statistics of the types of the covering of napkin area in relation to MU.

Types of powder and creams	Normal (No.)	MU (No.)	Total (No.)	%
Market powder	208	9	217	54.25
Zinc oxide paste	40	3	43	10.75
Hamol (mixture of many ingredients)	26	1	27	6.75
Nystacort (nystatin+triamicinolone+neomycin+gramicidin)	25	1	26	6.5
Celavex cream (cetrimide 0.5%)	21	1	22	5.5
Nil	11	2	13	3.25
Gentian violet solution 5%	9	2	11	2.75
Zyrakon (local folk medicine)	10	1	11	2.75
Nystatin ointment (nystatin+zinc oxide)	9	1	10	2.5
Others	8	1	9	2.25
Quadriderm (betamethasone+gentamicin+clioquinol+tolnaftate)	5	1	6	1.5
Zinc oxide+castor oil	4	1	5	1.25
Total	376	24	400	100

X^2=26.090, p<0.0

Table 4. Descriptive statistics of types of the powder and creams that were used in studied neonates in relation to MU.

In this study, 364 neonates (91%) were not circumcised and the main cause of not to circumcise was, there is a time for circumcision after neonatal period in 234 neonates (64.28%), to avoid pain in 88 (24.17%), social causes in 37 (10.18%), and medical causes in 5 neonates (1.37%) of which 3 of them due to jaundice, and other 2 neonates due to severe napkin dermatitis. The decision of not to circumcise was determined by neonates' parents (as they thought).

Country	Year	Neonatal circumcision (%)
New Zealand[23]	1995	10-20
Canada[24]	2005	9.2
Australia[25]	2004	10-20
USA[20,26]	2003	55.9-61
UK[27]	1972	0.41

Table 5. The incidence rate of the neonatal circumcision in some countries.

DISCUSSION

The MU is rare in neonates who are not circumcised, so the circumcision is believed to be the single most important causative factor for MU in neonates. As found in this study, the incidence rate of neonatal circumcision is (9%).: X^2= 115.4361, p<0.01.

These results agreed with other studies as some groups such as follower's of Jewish and Islamic faiths practice circumcision for religious and cultural reasons.[7-9,22,23] The incidence of the circumcision in some countries as New Zeeland,[23] Canada ,[24] and Australia[25] is shown in (Table 5). There is wide difference in results between USA[26] and UK[27] studies. Circumcision rates in England continued to fall up until 2000, particularly in those aged under 5 years.[28] In USA, there are large number of Jewish and Muslims (there is religious and cultural indication for neonatal circumcision).[23] For Jewish, the circumcision was done for every neonate at age of 8 days, unless there is severe medical contraindication for neonatal circumcision.[23]

In this study, most of the people were Muslims, and there was no obligatory indication for neonatal circumcision, but the circumcision should be done for every Muslim individual in childhood age,[7] even though the circumcision rate should be higher in this Muslim country than in non-Muslim countries . So when there is an increase in the incidence rate of neonatal circumcision in any community, this lead to increase in the incidence rate of neonatal MU, stenosis, inflammation and other complications in that community.[12,14,29,30]

This study showed that MUs were present in 15/36 (41.66%) of circumcised neonates. In comparison with other 3 studies: In the Canadian study, the MUs were present at one time or another in (31%) of neonates, some neonates had recurrent ulceration. Also in most cases the ulceration was mild, but in one case it was severe and caused much discomfort to the neonate. No MUs were reported in 4 babies in whom the foreskins covered the glans.[5] An epidemiological study of MU during the first 28 days of life involving 169 neonates born to Jewish found that (48%) of male neonates presented with MU within 12 days after the circumcision.[31] In American study, the incidence of MU following circumcision is (8-20%).[32]

This difference in results may be explained as the circumcision procedure sometimes done under abnormal conditions (sterilization, place, technique, instruments, person who did the circumcision). It may be done by not well trained persons, infrequent changes of wet diapers especially at night make the uncovered glans and meatus to come in contact with the urine, and excessive uses of nylon and/or nylon diapers.[7] There were no follow up for neonates after circumcision especially those who were circumcised by nurses and not using or applying a suitable ointment to the glans after circumcision. All these factors lead to increase in the incidence of neonatal MU.[7]

In this study, the high incidence of circumcision in age group 8-14 days was reflected in presentation of MU in circumcised neonates in age group 15-21 days (Table 1, 2). While in other study, MU develops within 12 days after circumcision.[23]

The use of powder and creams is not a significant measure in this study for preventing MU, but not using

powder and creams may accelerate formation of MU (X^2=26.090, p<0.05), Table 4.

In this study, the use of nylon diapers or piece of nylon accelerated the development of MU, ammoniacal diaper dermatitis (Table 3). This agrees with other studies.[7,17]

In this study, MUs were more in circumcised neonates by dressers than those circumcised by doctors. Therefore the well experienced trained doctors who did the circumcision may decrease the incidence of MU and other complications.[33-36]

In this study, most of neonates with post circumcision MU had redness of the tip of the glans.This agrees with other studies.[7,12]

Existing scientific evidence demonstrates potential benefits of newborn male circumcision. However, these data are not sufficient to recommend routine neonatal circumcision. If circumcision is performed in the neonatal period, it should only be done on infants who are stable and healthy.[18-21,37-39]

This study had its limitation in terms of sample size to draw more solid conclusion regarding the incidence rate of MU among circumcised newborns. Another limitation is the lack of follow-up of those circumcised neonates who developed MU especially with regard to UTI, dilated and or obstructed urinary tracts, impaired renal function, other long-term bad consequences.

CONCLUSIONS

Circumcision was the main cause of MU in male neonates. Other contributing factor include not well trained person performing the circumcision. Ammoniacal diaper and not using powder and creams following circumcision were also accelerating factors for the development of MU.

I recommend that circumcision need to be done by well trained person and followed up after circumcision. MU can be prevented by good parents` care. I also recommend to do further larger size studies and to follow them for long-term bad consequences to give firmer recommendation regarding neonatal circumcision.

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Original Article

موضوع إصيل

CYTO-DIAGNOSIS IN KHARTOUM: IS IT STILL A VALUABLE INVESTIGATION AT THE CURRENT SITUATION?

التشخيص بالفحص المجهري للخلايا وأهميته التشخيصية الحالية

Mohamed T Musa MI, *MD;* Randa Z A Khair, *MD*

د. محمد توم موسى، د. رندا زكي عبد الرحمن

ملخص البحث

هدف البحث: تحديد قيم الحساسية، النوعية، الدقة للفحص الخلوي بالمقارنة مع الفحص النسيجي المرضي والتشخيص السريري وذلك بشكل عام من جهة وبشكل محدد في أعضاء معينة من الجسم من جهة أخرى.

طرق البحث: تم إجراء دراسة مستقبلية في مشفى الخرطوم التعليمي حيث شملت الدراسة 1223 من تقارير الفحص الخلوي أو الفحص النسيجي. تم تحليل البيانات من خلال برنامج SPSS الحاسوبي.

النتائج: بلغ عدد التقارير المسجلة 1223 حالة، منها 476 تقرير فحص خلوي و747 تقرير فحص نسيجي. بلغت القيم الإجمالية للحساسية، النوعية والدقة للفحص الخلوي 52.7 و61.2 و56.3% على الترتيب، فيما بلغت هذه القيم بالنسبة للفحص النسيجي 76.6 و79.9 و78.2% على الترتيب.

الاستنتاجات: يظهر الفحص الخلوي قيماً منخفضة للحساسية، النوعية والدقة بالمقارنة مع الفحص النسيجي.

ABSTRACT

Objective: *To determine sensitivity, specificity and accuracy of cytopathology compared to histopathology and clinical diagnosis in general and for different organs*

Methods: *A prospective study conducted in Khartoum Teaching Hospital. Total number of 1223 cyto- or histo-pathology reports were included. Data were analysed using SPSS computer program.*

Results: *Total number was 1223, 476 cytopathology and 747 histopathology reports. The overall sensitivity, specificity and accuracy of cytopathology were 52.7, 61.2 and 56.3% respectively, while those of histopathology were 76.6, 79.9 and 78.2% respectively.*

Conclusions: *Cytopathology has significantly low sensitivity, specificity and accuracy compared to histopathology.*

INTRODUCTION

Historical background: Diagnosis of soft tissue tumors is a big challenge to the pathologists[1] and surgeons as well.

Use of microscopes and their applications in clinical medicine started in UK as early as 1854. Cytology was introduced then, even before the introduction of histologic methods.[2,3] Then in 1880s, histological examination by using paraffin embedding was started. Professor LS Dudgeon of St. Thomas' Hospital developed the cytodiagnosis from scrapings of the tumours and also the possibility of identifying malignant cells in the sputum in cases of lung cancer. Together with C H Wrigley, professor Dudgeon published the first systemic account for diagnosing lung cancer smears in 1935. Cytodiagnosis was then applied routinely before

*Mohamed T Musa MI, MD, Associate Professor of Surgery, Department of Surgery, Faculty of Medicine, University of Khartoum, Khartoum, Sudan. E-mail: toumandrandaatlas@hotmail.com.
*Randa ZA Khair, MD, Assistant Professor of Surgery, Department of Surgery, Faculty of Medicine, University of Khartoum, Khartoum, Sudan.

the second world war for diagnosing brain tumours.[2]

Exfoliated cancer cells were described before the end of the 19th century. After the World war II[3] in the 20th century, Papanicolaou[2,4] and Traut diagnosed the uterine cancer by the exfoliated cells in 1941 and 1943. In 1980s and 1990s, respectively, the cytopathology and the automated screening system had developed. Hence the 20th century is marked as the "century for cytopathology"[4] and Papanicolaou was described as being the "father of modern cytology".[5]

Indications: Apart from cervical smears, cytopathology has wide range of uses in different organs:

- Testing the fluid and secretions:
  1- Spontaneous secretions: e.g. nipple discharge and sputum for malignant cells in cases of breast and lung cancers; the latter was used in the past.
  2- Fluid achieved by aspiration: e.g. pleural aspirate, ascitic fluid and cysts.

- Testing solid lumps in externally accessed organs e.g. breast,[6,7] thyroid,[8] parotid,[9] lymph nodes[10] and as a complement to histopathology in soft tissue sarcoma.[1]

- Achieving biopsies from solid internal organs percutaneously: e.g. liver, pancreas. In the latter Imaging- guided FNAC is found to have high sensitivity in diagnosing pancreatitis.[11] In general it can be achieved percutaneously or better achieved, especially in deep masses or non-palpable masses, under image, ultra sound or radiological, guidance.

- Achieving biopsies from internal tubal organs through endoscopic guidance: e.g. oesophagus, stomach, anus, large bowel and biliary tract.

Advantages: It is rapid[8,12] and hence shortens the time of hospital admission.[12] It is also accurate for diagnosis of cancer.[12] It is relatively inexpensive[6,8,12] and safe even in vascular organs like the thyroid.[8]

Disadvantages: FNAC is painful and distressing.[13] It needs regular practice for the aspirators and there may be difficulty with interpretation in less experienced pathologists, hence it requires training of both aspirator and pathologists.[7]

Unlike FNAC, histopathogy allows the assessment of invasion, shows the grading and subtypes of malignant breast lesions as well as facilitating the diagnosis of benign ones.[12]

Technique: Cytopathology which started by testing sputum and uterine smears, started developing by achieving cells by minimally invasive fine needles. The sample is collected using a narrow gauge, 24-22G[12] or 21G needles.[13] The success of Fine Needle Aspiration Cytology depends upon the technique of achieving the sample. It can be used freehand or guided sonogrophically or radiographically.

Accuracy: Cytopathology showed variable percentages of accuracy, sensitivity and specificity with regards to the site, technique, type of pathology, aspirator skills, geographical...etc.

In breast, FNAC is accurate[6,9,14] and it is both sensitive and specific[6,12] especially in the right hand,[6] but histology is more sensitive and specific,[12] while in thyroid, FNAC is very sensitive in detecting anaplastic and papillary malignant nodules while it offers direct sampling for follicular neoplasms.[12] It has high sensitivity and specificity in diagnosing primary lymphnode malignancies e.g. lymphoma[10] and metastatic tumors.[12] In diagnosing parotid tumors, FNAC showed poor accuracy while ultrasound-guided core biopsy showed better results.[9] Experience of aspirator has an obvious influence on the accuracy, complication rates and adequacy of the sample.[12] Neither the needle size nor use of local anaesthetic seems to affect the accuracy. A 23G needle without local anaesthetic has a better accuracy, comfort and easy application, while using 21G needle with local anaesthetic provide tactile sensation for clinicians and relieve pain.[13]

In a study done in Sudan in the period from 1954 to 1961, a sample of 2234 different sites histopathological specimens were mentioned while cytology was not mentioned in the diagnosis of cancer at that time.[15]

The aim of this work is to study the sensitivity, specificity and accuracy of cytopathology in relation to clinical diagnosis and histopathology generally and in

different sites as breast, thyroid, GIT and external solid organs.

METHODS

A prospective study done in Khartoum-Sudan in the period between January 2006 to February 2008. It involves 1223 different sites cytopathology or histopathology reports. A computer based data questionnaire was filled for each patient containing the personal data, clinical diagnosis, site, type and result of each biopsy, the sufficiency or adequacy of the reports, the relation to clinical diagnosis ...etc.

The data was analysed both manually and using SPSS computer program. The sensitivity, specificity and accuracy of both cyto- and histo-pathology were calculated. The probability values were achieved using the statistics calculator as well, mainly in comparisons of the accuracy values.

RESULTS

Total number of reports were 1223. Cytopathology were 476 and histopathology were 747. Males were 345 and females were 878 (M:F is 2:5). The overall mean age was 41.6±16.3 (ranging between 2-85) years.

The overall cytopathology were 476 while the histological samples were 747. The sensitivity, specificity and accuracy of the multivariate cytopathology were 52.7, 61.2, 56.3% respectively. While that of histopathology were 76.6, 79.9 and 78.2% respectively.

The breast represents the majority in both cyto- and histo-pathology but it was not included in this study.

Reference	Year of publication	Country or city	Site	No. of patients	Sensitivity	Specificity	Accuracy
Gregoire M, et al[25]	1997	Canada	Urinary bladder	166	59-66%	85-83%	-
Schoenberg, MH et al[11]	1999	Japan	Pancreas	-	88%	90%	-
Cohen M, et al[24]	2003	Auburn	Animals	269	33.3-66.1%	-	-
Sankarananaryanan R, et al[23]	2004	India	Cervix	22,663	64.5%	92.3%	-
Stow N, et al[16]	2004	Australia	Salivary glands	104	86.9% C	96.3% C	92.3% C
					88.6% B (76-97%)	94.1% B (61-83%)	92.3% B (56-98%)
					85.3% M (55-87%)	98.6% M (90-100%)	94.2% M
Chhieng, DC[17*]	2004	USA	Liver	Review	85% (67-100%)	100%	-
Kundra V, et al[18]	2005	Texas	Abdomen/pelvis	86	74%	94%	78%
Howlett DC[9]	2006	UK	Parotid	-	38%	-	- (97-100% USCB)
Koliopoulos G, et al[19*]	2006	UK	Uterine cervix	25 Review	72.7-61.6%	91.9-96.0%	-
Dey P, et al[20]	2006	Kuwait	Lymphnodes	48	83.8%	100%	-
Joo HJ, et al[21]	2007	Korea	Uterine cervix	966	92.7-90.0%	87.2-66.2%	-
Rekhi B, et al[22]	2007	India	Soft tissue tumours	127	100%	83.3%	98%
Ibrahim MT M, Khair RZ	2008	Sudan	Multiple	476	52.9%	83.2%	65.8%

B: Benign, M: Malignant, C: Combined, USCB: UltraSound guided Core Biopsy, *: Review

Table 1. Comparison between the sensitivity, specificity and accuracy of this study and other studies.

Reference	Country or city	Year of publication	No. of patients	Sensitivity	Specificity	Accuracy
Lin JD, et al[26]	Taiwan	1997	3657	79.8%	98.66%	-
Giard RW, et al[27]	Netherlands	2001	591	57-70% 67% f 89% a & m	-	-
Blansfield JA, et al[28]	Abington	2002	183	-	-	93%
Morgan JL, et al[29]	Australia	2003	253	55%	73.7%	67.2%
Matinek A, et al[30]	Czech republic	2004	245	71% f 94% a	63% f 86% a	67% f 88% a
Cai XJ, et al[31]	UK	2006	434	83.3% M 80.5% N	98.0% M 97.8% N	97.0% M 97.5% N
Tsan CJL, et al [32]	Australia	2007	660	60% 79.1%	83.7% 79.4%	76% 79.3%
Bukhari MH, et al[33]	Pakistan	2008	76	90%	87.5%	87%
Ibrahim MT M, Khair RZ	Sudan	2008	93	35.7%	86.1%	92.4%

f: follicular carcinoma, m: medullary carcinoma, a: anaplastic carcinoma, M: malignant, N: neoplastic

Table 2. Comparison between the sensitivity, specificity and accuracy of the thyroid cytopthology in this study and the literature.

Other sites are the thyroid which showed accuracy of 92.4% of cytopathology vs 74.5% histopathology, skin and subcutaneous showed 100% and 85.9% specificity and 62.5% and 78.3% accuracy of cytopathology and histopathology respectively. While in the lymphnodes, the sensitivity, specificity and accuracy were 59.4 vs 69%, 81.8 vs 87.5% and 65.1 vs 73% in cyto- and histo-pathology respectively. In the GIT and the related organs, cytopathology specimens were negligible and not comparable to hisopathology.

DISCUSSION

Generally, the overall sensitivity, specificity and accuracy of cytopathology were low (52.9, 83.2 and 65.8% respectively) compared to clinical diagnosis and histopathogy (76.6, 87.5 and 81.8% respectively) with a statistically significant difference (p-values: 0.0000, 0.0358 and 0.0000 respectively).

Cytopathology reports showed some more deficiencies in reporting e.g. either confirmed the diagnosis in an uncertain way or raised more suspicions in 35.5% while excisional biopsy was recommended in 12.5%.

Most of the studies worldwide mentioned about specific site sensitivity, specificity and/ or accuracy.

Comparing the results achieved in this study, the overall multivariate values, sensitivity,[11,16-22] specificity[11,16-22] and accuracy,[16,18,22] showed lower results than other studies in the same field.

An example to that, a study conducted in multicentre in India in the period 1999 to 2003 revealed a sensitivity of 64.5% and specificity of 92.3% in detecting high grade intraepithelial lesions[23] which are still higher than our series. Another interesting study, in which cytology was assessed in 269 different animals, revealed sensitivity ranging between 33- 66%.[24]

As seen in Table 1, our series show lower values than most of the different sites. The exceptionally comparable studies were two:

- A study done by Mireille Gregoire et al in 1996 assessing urinary bladder cytology in 166 patients. It revealed 59-66% sensitivity and 85-83% specificity,[25]
- Another study DC Howlett revealed low sensitivity (38% only) of parotid gland cytology while the

ultrasound guided core biopsy (USCB) had a very high accuracy (97-100%).[9]

Taking thyroid gland as an example, in our series, the overall specificity and accuracy (86.1 and 92.4% respectively) of the thyroid gland cytology were comparable to the literature but the sensitivity (35.7%) was significantly very low[26-33] (Table 2).

CONCLUSIONS

Cytopathology has low sensitivity, specificity and accuracy in relation to clinical diagnosis and histopathology, hence and in the current situation, it cannot be the isolated pathological investigation for diagnosing malignancies. Many factors, as deficient and inconclusive reports, lessen the accuracy of cytopathology. Multidisciplinary clinics establishment is recommended to improve the outcome.

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Original Article

موضوع إصيل

A STUDY OF ALT ELEVATION IN ASSOCIATION WITH TRIGLYCERIDES, CHOLESTEROL AND GLUCOSE ELEVATION IN HUMAN SERUM

دراسة ارتفاع خميرة ناقلة أمين الألانين ALT لدى ارتفاع المستويات المصلية للشحوم الثلاثية، الكولسترول والسكر

Mohammed Wael Daboul, *D.D.S, MSc*

د. محمد وائل دعبول

ملخص البحث

هدف البحث: يعتبر مرض تشحم الكبد اللاكحولي من أكثر الأمراض التي تصيب الكبد شيوعاً. تعتبر السمنة، الداء السكري المقاوم للأنسولين، اضطراب مكونات الكولسترول وارتفاع تركيز الشحوم الثلاثية العوامل الأكثر أهمية في التسبب بالمرض. قد يترافق المرض في مراحله المبكرة مع ارتفاع خميرة ناقلة أمين الألانين (ALT). وبناءً على ذلك فمن المنطقي الافتراض بأن ارتفاع الغلوكوز أو الكولسترول أو الشحوم الثلاثية أو ترافق ارتفاع أي منهم مع الآخر في الدم ينبغي أن يكون له تأثير أساسي في زيادة عدد الحالات التي ترتفع فيها خميرة ناقلة أمين الألانين في الدم. تهدف هذه الدراسة إلى تحديد وجود ترافق بين: 1–الفصيل ذو مستوى الغلوكوز المرتفع مقارنةً مع الفصيل ذو الغلوكوز الطبيعي. 2– الفصيل ذو الكولسترول المرتفع مقارنةً مع الفصيل ذو الكولسترول الطبيعي. 3– الفصيل ذو الشحوم الثلاثية المرتفعة مقارنةً مع الفصيل ذو الشحوم الثلاثية الطبيعية. 4– الفصيل ذو الشحوم الثلاثية المرتفعة مقارنةً مع الفصيل الذي يترافق فيه ارتفاع الشحوم الثلاثية مع الغلوكوز المرتفع والفصيل الذي يترافق فيه ارتفاع كل من الشحوم الثلاثية والغلوكوز والكوليسترول في آن معاً. 5– الفصيل ذو الشحوم الثلاثية المرتفعة مقارنةً مع الفصيل الذي يترافق فيه ارتفاع كل من الغلوكوز والكوليسترول في آن معاً. والزيادة في عدد الحالات التي تكون فيها خميرة ALT مرتفعة في الدم.

طرق البحث: تألفت عينة البحث من 245 رجلاً وامرأة، تم تحري خميرة ALT في مصولهم وذلك بعد اعتماد تعريف السمنة كما يلي (محيط الخصر ≤85 سم). تم تقسيم العينة المدروسة في كل حالة إلى فئتين: فئة ذات قيم مخبرية طبيعية وأخرى ذات قيم غير طبيعية. ومن ثم تم إجراء دراسة مقارنة حول تأثير ارتفاع كل من المعايير التالية (الغلوكوز، الكولسترول والشحوم الثلاثية) على ارتفاع خميرة ALT. تم استخدم اختبار (Chi-square) الإحصائي كوسيلة لمقارنة النتائج.

النتائج: أبدت الزمر ذات المستوى المرتفع من الغلوكوز أو الكولسترول بالمقارنة مع الزمر ذات المستويات الطبيعية من الغلوكوز أو الكولسترول عدم وجود أية اختلافات ذات دلالة في زيادة عدد حالات ارتفاع ALT في الدم (45<ALT وحدة دولية/مل). أما في حالة وجود ارتفاع في مستوى الشحوم الثلاثية في الدم (150< ملغ/دل) فقد ترافق هذا الارتفاع مع زيادة في عدد حالات ارتفاع ALT في الدم. أما الترافق في ارتفاع كل من الغلوكوز والشحوم الثلاثية أو ترافق ارتفاع الكولسترول والغلوكوز والشحوم الثلاثية سويةً بالمقارنة مع ارتفاع الشحوم الثلاثية فقط فلم يبد أي اختلاف ذو دلالة في زيادة عدد حالات ارتفاع ALT في الدم. كما أن ترافق تأثير ارتفاع كل من الكولسترول والغلوكوز سويةً يشابه تأثير ارتفاع الشحوم الثلاثية على زيادة عدد حالات ارتفاع ALT في الدم.

الاستنتاجات: يحتل ارتفاع الشحوم الثلاثية –بغض النظر عن ترافقه بارتفاع الغلوكوز أو الكولسترول أو ارتفاع كليهما– أهمية في تقدم وتطور مرض تشحم الكبد. يمكن لارتفاع الشحوم الثلاثية في الدم أن يتسبب في تأذي الخلايا الكبدية من خلال ترافقه مع ارتفاع خميرة ALT. أما ارتفاع الغلوكوز أو الكولسترول بشكل منفصل فلم يبدي أي تأثير مباشر على ارتفاع خميرة ALT. إن التأثير المتشابه لارتفاع كل من الغلوكوز والكولسترول معاً من جهة وتأثير ارتفاع الشحوم الثلاثية في زيادة حالات ارتفاع خميرة ALT لايمكن أن يعزى إلى التأثير المباشر لارتفاع كليهما سوية على ارتفاع الخميرة فحسب،

*Mohammed Wael Daboul, MD, D.D.S, MSc Biology, MT (ASCP), Laboratory Medicine Specialist, Damascus, Syria. E-mail: idaboul@scs-net.org

وإنما بآلية غير مباشرة من خلال ترافق ارتفاعهما مع ارتفاع الشحوم الثلاثية في الدم، وإن هذا الارتفاع في حد ذاته هو الذي يبرر زيادة عدد حالات ارتفاع ALT في الدم.

ABSTRACT

Objective: *Non Alcoholic Fatty Liver Disease (NAFLD)is very common. Obesity, insulin resistant diabetes, cholesterol components disturbance and elevation of triglyceride are considered the most important causes of this disease. At an early stage of the disease, one of the major elevated enzymes is the (ALT) (Alanin Amino transferase) enzyme. Accordingly, it is justified to assume that an elevation of one of the blood figures glucose, cholesterol and triglyceride or their combination, will have a major effect on increasing the number of cases of elevated (ALT) in blood. This study, aimed at defining. An existence of an association between:1- The high levels glucose group versus normal glucose group. 2-(The high levels cholesterol group versus normal cholesterol group). 3- The high levels triglyceride group versus normal triglyceride group). 4-The group having high Triglyceride versus the group having combined high triglyceride and high glucose and the group having triglyceride, glucose and cholesterol elevated. 5- The group having high Triglyceride versus the group having combined high cholesterol and high glucose). And the increase in the number of cases of elevated serum ALT in blood.*

Methods: *The sample consisted of 245 of both males and females who had their serum ALT detected after defining the obesity in the study group as the: (waist circumference ≥ 85 cm). In each study case the sample was divided into two groups normal and abnormal. A study was conducted on the effect of the elevated level of each of the three parameters (Glucose, Cholesterol and Triglyceride) on ALT elevation. Chi-Square test was used as a mean of comparing the results.*

Results: *When compared to normal levels, high glucose or high cholesterol showed no significant difference in increase cases of high ALT in blood > 45 iu / ml. When triglyceride was elevated in blood > 150-mg/ dl, it was associated with an increase in the number of cases of high ALT in blood. The combination of high glucose and cholesterol or high glucose, cholesterol and triglyceride when compared to high triglyceride alone did not show any significant difference in elevated cases of high ALT in blood. The combination effect of both high cholesterol and high glucose is equivalent to the high triglyceride effect on the increase in the number of cases of high ALT in blood.*

Conclusions: *High triglyceride, regardless of its association with the elevation in glucose or cholesterol or both, has a role to play in fatty liver disease development and progress. The elevation of triglyceride in blood can cause harm to the hepatocytes due to its association with the enzyme ALT elevation. High glucose or high cholesterol alone on the other hand, did not show any significant effect on ALT elevation. The equivalent effect of the combination of both high glucose and high cholesterol to the effect of high triglyceride on ALT elevation is justified not only by their direct effect on elevating ALT but indirectly on elevating triglyceride which by itself causes the elevation in ALT.*

INTRODUCTION

The elevation of the liver enzyme ALT (Alanin Amino Transferase) is usually associated with some liver damage. By excluding the drug related ALT elevation and the viral factors such as hepatitis A, B and C, which can cause liver damage and are associated with elevation in serum ALT, nonalcoholic fatty liver disease (NAFLD) is considered one of the major liver diseases, sometimes associated with mild elevation in ALT. It describes a range of conditions involving the liver that affect people who drink little alcohol or are non-alcoholic. Obesity on the other hand, one or more abnormal cholesterol levels, high levels of triglycerides, and resistance to insulin are considered the most important factors that cause NAFLD.[1,2]

In the light of the aforesaid facts, we assume that type 2 diabetes, high serum cholesterol and triglycerides, whether separated or in combination, could have a damaging effect on liver cells which is manifested in fatty liver and may be associated with ALT elevation. The purpose of this study is to detect this elevation in serum ALT on obese human subjects in response to high serum glucose, cholesterol and triglycerides, each in separated case or in combination, after excluding drug

related ALT elevation and cases of elevated ALT due to hepatitis A, B and C.

REVIEW OF LITERATURE

Obesity is a major health problem worldwide. In the United States, roughly 300,000 death cases per year are related to obesity. Obesity also increases the risk of developing several chronic diseases such as type 2 diabetes, insulin resistance, coronary heart disease (responsible for heart attacks), cerebrovascular disease (responsible for strokes), high blood pressure, gout, gallstones, colon cancer, sleep apnea, and nonalcoholic fatty liver disease (NAFLD).[2]

Nonalcoholic fatty liver disease on the other hand, is emerging as the most common chronic liver condition in the west. It is associated with insulin resistance.[2,3] Fatty liver or NASH (Nonalcoholic steatohepatitis) is very common among overweight persons over the age of 30. Fatty liver contains an excessive amount of fat. In such a liver, liver cells and the spaces in the liver are filled with fat so the liver becomes slightly enlarged and heavier.[4] There may also be elevation of the liver enzymes.

Fatty liver may cause no damage, but sometimes the excess fat leads to inflammation of the liver.[4] Disease presentation ranges from asymptomatic elevated liver enzyme levels to cirrhosis[1,5] with complications of liver failure and hepatocellular carcinoma.[1,5]

Epidemiology of NAFLD

Hepatic steatosis detected by magnetic resonance spectroscopy is found in 31% of adults in the United States. Ultrasonography detects fatty changes in the liver in 12.9%–16.4% of individuals. NAFLD is more frequent among people with diabetes (50%) and obesity (76%),[3,5] and it is almost universal among diabetic people who are morbidly obese. More than 6 million children in the United States have the fatty liver disease.[6] Patients who have NAFLD appear to have a higher mortality than people in the general population. Patients with pure steatosis have a benign prognosis: follow-up of 198 patients for up to 21 years revealed progression to cirrhosis in 3 patients and liver-related death only in one case. In contrast, up to 11% of NASH patients may die of liver-related causes. Diabetes is a risk factor for fibrosis progression and for overall and liver-related death among NAFLD patients.[3] The presence of obesity or type 2 diabetes mellitus are the strongest predictors of liver fibrosis.[7] Around 16% of autopsy studied in patients with type 2 diabetes showed liver cirrhosis indicating that high prevalence of this disorder.[8]

Risk Factors of NAFLD

1-Overweight and obesity: More than 70 percent of people with nonalcoholic steatohepatitis (NASH) are obese.[2,4,5]

2- Diabetes: As many as three out of four people with NASH also have diabetes.[4,5]

3- Hyperlipidemia: High cholesterol levels and elevated triglycerides are common in people who develop NASH.[5] It's estimated that up to 80 percent of people with NASH have hyperlipidemia.[4,5]

METHODS

The sample consisted of 245 of both males and females who attended our laboratory between September 2007 and April 2008 and had their serum ALT detected. Having the attitude to develop a (large belly) in both males and females in our region of study, we came to consider the abdominal obesity index and not the body mass index as our obese subjects chosen index. Therefore, the cut-off criteria which has been proposed to define obesity in our study group was the (waist circumference ≥85 cm).[5] All individuals who had waist circumference <85 cm were excluded from the study.

All participants were screened for negative hepatitis A, B and C (by doing Anti HCV, HbsAg, Anti HAV IgM) and questioned for not taking any drug that can interfere with ALT elevation. Out of the 245 individuals, serum fasting glucose was done on145, serum cholesterol on 151 and serum triglyceride on 163 individual. Each statistical sample studied was divided into two groups considering the upper normal value as the cut off point in group partition, (e.g. one group with high serum levels of triglyceride versus the other group with normal levels). Then, a comparison study was conducted on

the effect of the elevated level of each of the three parameters (Glucose, Cholesterol and Triglyceride) on the ALT elevation as follows:

1- One study measures elevated cases of serum ALT >45 IU/ml in group one having high serum glucose level >110 mg/dl versus group two with normal serum glucose <110 mg/dl.

2- Another study measures elevated cases of serum ALT >45 IU/ml in group one having high serum cholesterol >200 mg/dl versus group two with normal serum cholesterol <200 mg/dl.

3- A third study measures elevated cases of serum ALT >45 IU/ml in group one having high serum triglyceride >150 mg/dl versus group two with normal serum triglyceride <150 mg/dl.

4- A fourth study measures elevated cases of serum ALT >45 IU/ml in group one having high serum triglyceride >150 mg/dl versus group two with combined high serum triglyceride and high serum glucose levels and group three with combined high serum triglyceride, high serum glucose and high serum cholesterol.

5- A fifth study measures elevated cases of serum ALT >45 IU/ml in group one having high serum triglyceride >150 mg/dl versus group two with combined high serum cholesterol and high serum glucose.

We used the Chi-square test as a means of comparing the results according to the following null hypotheses: The total number of elevated cases of ALT values >45 IU/ml in the different study groups is equal under 0.05 level of significance. The alternative hypotheses: (The total number of elevated cases of ALT values >45 IU/ml in the different study groups is not equal under 0.05 level of significance).

RESULTS

Table 1 shows the number of cases with high serum ALT >45 IU/ml in group-one with high serum glucose versus group-two with normal serum glucose levels. It indicates that the Chi-square value is 0.171<3.84 under the 0.05 level of significance, which means that the null hypotheses is acceptable: there is no significant difference in the number of cases with high serum ALT values >45 IU/ml in both study groups (high serum glucose and normal serum glucose) under 0.05 level of significance.

Table 2 shows the number of cases with high serum ALT >45 IU/ml in group-one with high serum cholesterol versus group-two with normal serum cholesterol levels. It indicates that the Chi-square value is 0.0< 3.84 under the 0.05 level of significance, which means that the null hypotheses is acceptable: there is no significant difference in the number of cases with high serum ALT values > 45 IU/ml in both study groups (high serum cholesterol and normal serum cholesterol) under 0.05 level of significance.

Table 3 shows the number of cases with high serum ALT >45 IU/ml in group-one with high serum triglyceride versus group-two with normal serum triglyceride levels. It reveals that the Chi-square value is 4.166>3.84 under the 0.05 level of significance, which means that the null hypotheses: there is no significant difference in the number of cases with high serum ALT values >45 IU/ml in both study groups (high serum triglyceride and normal serum triglyceride) under 0.05 level of significance is inapplicable and the null hypotheses is rejected. We accept the alternative hypotheses: The number of cases with high serum ALT values >45 IU/ml in both study groups is not equal under 0.05 level of significance.

Table 4 shows the number of cases with high serum ALT >45 IU/ml in group-one with high serum triglyceride versus group-two with combined high serum triglyceride and high serum glucose and group three with combined high serum triglyceride, glucose and cholesterol. It indicates that Chi-square value is 0.46<5.99 under the 0.05 level of significance, which means that we accept the null hypotheses: there is no significant difference in the number of cases with high ALT values >45 IU/ml in the three different study groups (high triglyceride >150 mg/dl, combined high triglyceride >150 mg/dl and high glucose >110 mg/dl, combined high triglyceride, high glucose >110 mg/dl and high cholesterol >200 mg/dl) under 0.05 level of significance.

Table 5 shows the number of cases with high ALT >45 IU/ml in group-one with high serum triglyceride versus group-two with combined high serum cholesterol and high serum glucose. It reveals that the Chi-square value is 2.40<3.84 under the 0.05 level of significance, which

means that we accept the null hypotheses: The total number of cases of high serum ALT values >45 Iu/ml in both the study groups (high triglyceride >150 mg/dl, combined high cholesterol >200 mg/dl and high glucose >110 mg/dl,) is equal under 0.05 level of significance.

DISCUSSION

This study aims at revealing the importance of those major risk factors, which are high serum glucose, high serum cholesterol and high serum triglyceride levels among the obese targets and there association with the liver enzyme ALT (Alanin amino transferase) elevation. Through that we estimate their impact on nonalcoholic fatty liver disease (NAFLD). We have tried our best to restrict ourselves to those factors by excluding other variables which contribute to serum ALT elevation e.g. (A, B, C hepatitis) and drug related cases on our defined obese subjects with their waist circumference> 85 cm. In order to achieve more accuracy, we have chosen to do this study by separately working on a single variable first, e.g. (glucose, cholesterol, triglyceride), then the study combined the different variables to evaluate the combination effect of those variables.

On going back to Table 1. Chi-square value was only 0.171 which is close to 0. Our findings show that elevated serum glucose >110 mg/dl alone has no direct impact on or association with increasing cases of high serum ALT. Thus we conclude that high levels of serum glucose alone has no association with elevated cases of serum ALT.

The same applies to cholesterol as our results in Table 2 with the Chi-Square value (0) indicate that there is no direct correlation between the elevated serum cholesterol >200 mg/dl alone and the increase number of individuals with high serum ALT. Thus we conclude that high levels of serum cholesterol alone has no association with elevated cases of serum ALT.

Our interesting finding appears in Table 3. It indicates that high serum triglyceride >150 mg/dl by itself has a strong impact on and association with increasing the number of cases with high serum ALT >45 IU/ml, hence causing more damage to the liver.[6] Thus we conclude that high levels of serum triglyceride is associated with serum ALT elevation .This finding is in consistent with and supports what is written in risk factor above. "It's estimated that up to 80 percent of people with NASH have hyperlipidemia."

Our previous findings in Table 3 are supported with the results shown in Table 4 as we found that the combining

Glucose	Total No. of tested cases	No. of cases with ALT >45 IU/ml	Expected No. of cases with ALT >45 IU/ml	Chi-square value
Glucose >110	74	12	11	0.171
Glucose< 110	80	11	12	
Total	154	23		

Table 1. Shows the number of cases with high serum ALT >45 IU/ml in group-one with high serum glucose versus group-two with normal serum glucose levels.

Cholesterol	Total No. of tested cases	No. of cases with ALT >45 IU/ml	Expected No. of cases with ALT >45 IU/ml	Chi-square value
Cholesterol >200	36	5	5	0
Cholesterol <200	115	17	17	
Total	151	22	22	

Table 2. Shows the number of cases with high serum ALT >45 Iu/ml in group-one with high serum cholesterol versus group-two with normal serum cholesterol levels.

Triglyceride	Total No. of tested cases	No. of cases with ALT >45 IU/ml	Expected No. of cases with ALT >45 IU/ml	Chi-square value
Triglyceride>150	66	15	10	4.166
Triglyceride<150	97	10	15	
Total	163	25		

Table 3. Shows the number of cases with high serum ALT >45 IU/ml in group-one with high serum triglyceride versus group-two with normal serum triglyceride levels.

Elevated Tg compared to elevated cho, tg, glu	Total No. of tested cases	No. of cases with ALT >45 IU/ml	Expected No. of cases with ALT >45 IU/ml	Chi-square value
TG > 150	66	15	14	0.46
Glu>110, TG>150	33	6	7	
TG>150, Glu>110 Cho> 200	20	5	4	

Table 4. Shows the number of cases with high serum ALT >45 IU/ml in group-one with high serum triglyceride versus group-two with combined high serum triglyceride and high serum glucose and group three with combined high serum triglyceride, glucose and cholesterol.

Elevated triglyceride compared to elevated cholesterol and glucose	Total No. of tested cases	No. Of cases with ALT >45 iu/ml	Expected No. of cases with ALT >45 iu/ml	Chi-Square value
Triglyceride>150	66	15	12	2.4
Glu>110, cho>200	45	5	8	
Total	111	20		

Table 5. Shows the number of cases with high ALT > 45 IU/ml in group-one with high serum triglyceride versus group-two with combined high serum cholesterol and high serum gluose.

effect of high serum cholesterol or high serum glucose or both together with high serum triglyceride did not add more impact to what high serum triglyceride alone had on the increasing cases of high serum ALT.

Elevated serum triglyceride by itself is associated with increase cases of serum ALT elevation and thus may have a rule to play in NAFLD while the other two factors elevation when they are separately elevated have a limited rule if at all.

At the end, we were interested in evaluating the association of high serum triglyceride alone in contrast to samples having (serum cholesterol and serum glucose simultaneously elevated) with serum ALT elevation. Surprisingly, we found in Table 5 that both synergistically elevated serum cholesterol and glucose have the same high triglyceride impact. This finding can be explained by many studies, one of which is done by us and shows that (the combination of high serum cholesterol and serum glucose in blood is usually associated with increase cases of high serum triglyceride in blood). That leads us again to the emphasis on the importance of high serum triglyceride on ALT elevation and thus its impact on NAFLD.

CONCLUSIONS

This study declared that high triglyceride, regardless of its association with the elevation in glucose or cholesterol or both, has a rule to play in fatty liver disease development and progress. The elevation of triglyceride in blood can cause harm to the hepatocytes (1) due, among other factors, to its association with the enzyme ALT elevation. High blood glucose or high

blood cholesterol alone, in this study, on the other hand, did not show any significant effect on ALT elevation. The equivalent effect of the combination of both high glucose and high cholesterol to the effect of high triglyceride on ALT elevation is justified not only by their combined effect on elevating ALT but indirectly, on elevating triglyceride as well, which by itself causes the elevation in ALT.

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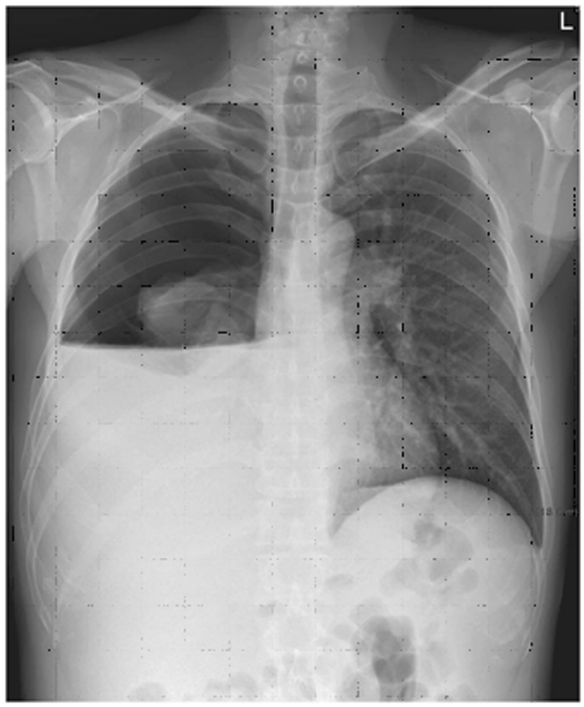
Medical Case



HYDROPNEUMOTHORAX

استسقاء الصدر الهوائي

A 47-year-old man with a history of cirrhosis associated with alcohol abuse presented with a 2-day history of shortness of breath. Before this symptom developed, he had been treated with repeated thoracentesis of the right side for cirrhosis-associated hydrothorax. On pulmonary examination, breath sounds were absent on the right side, and a succussion splash was audible in the right upper chest when the patient was gently shaken. Chest radiography showed hydropneumothorax with a collapsed right lung and an adjacent thoracic air–liquid level, which was probably the result of repeated thoracentesis. The patient was treated with chest-tube placement and diuretics. An analysis of the pleural effusion revealed transudative fluid without evidence of infection or cancer. The chest drain was removed 1 week later, after reexpansion of the lung.

راجع مريض عمره 47 سنة لديه قصة سابقة لتشمع كبد ناتج عن تناول الكحول بشكوى ضيق تنفس منذ يومين. تم قبل تطور هذه الأعراض إجراء بزل متكرر للصدر في الجهة اليمنى لمعالجة حالة استسقاء صدر مرافقة لحالة التشمع. لوحظ بفحص الصدر غياب الأصوات التنفسية في الجهة اليمنى للصدر، مع إمكانية سماع أصوات تلاطمية في أعلى الجانب الأيمن للصدر عند تحرك المريض بحركة اهتزازية. أظهر التصوير الشعاعي البسيط للصدر استسقاء صدر هوائي مع انخماص في الرئة اليمنى ووجود مستوى سائل–هواء قد يكون ناتجاً عن بزل الصدر المتكرر. تمت معالجة المريض بوضع أنبوب مفجر للصدر مع إعطاء المدرات. أظهر فحص سائل انصباب الجنب سائلاً رشحياً دون وجود دلائل على إنتان أو خباثة. تمت إزالة أنبوب التفجير بعد أسبوع عند عودة تمدد الرئة لوضعها الطبيعي.

Ping-Hsien Chen, M.D; Xi-Zhang Lin, M.D
National Cheng Kung University, Tainan, Taiwan
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Traslated by Samir Aldalati, M.D

Case Report

تقرير حالة طبية

CYSTIC LYMPHANGIOMA OF SMALL BOWEL MESENTERY IN AN ADULT

حالة ورم وعائي لمفي كيسي في مساريقا الأمعاء الدقيقة لشخص بالغ

Elayyan Al Sarsour, *MD*; Amer Hashim Hassan Al Ani, *MD*

Tahani Alkharoof, *MD*; Mohammed Zaied, *MD*

د. عليان الصرصور، د. عامر هاشم حسان، د. تهاني الخاروف، د. محمد زيد

ملخص الحالة

يمثل الورم الوعائي اللمفاوي الكيسي حالة خلقية سليمة نادرة الحدوث قد تلاحظ في جميع الأعمار. لا يكون هذا الورم عرضياً في غالبية الحالات حيث يكتشف بشكل عارض. يمكن للورم الوعائي اللمفاوي أن ينشأ من مساريقا الأمعاء الدقيقة. سنقوم هنا بعرض حالة ذكر عمره 22 سنة يشكو من آلام حول السرة، أظهر الفحص السريري لديه وجود كتلة كبيرة في القسم المركزي من تجويف البطن. أكدت الفحوصات المجراة قبل الجراحة وجود كتلة كيسية كبيرة. أظهر فتح البطن وجود ورم كيسي كبير في مساريقا الأمعاء الدقيقة تم استئصاله بشكل كامل، حيث أكد الفحص النسيجي المرضي أن الورم هو ورم وعائي لمفاوي كيسي.

ABSTRACT

Cystic lymphangiomas are rare congenital benign neoplasms that may occur at any age. They are often asymptomatic and found incidentally, they may arise within the mesentery of the small bowel. We describe a case of a 22-year-old male, who presented with paraumbilical abdominal pain, on examination a large mass in the central part of the abdominal cavity was discovered. Preoperative studies defined the presence of a large cystic mass.

At laparotomy, a large cystic tumor of the small bowel mesentery was excised. Histopathologic examination diagnosed the tumor as a cystic lymphangioma.

INTRODUCTION

Lymphangiomas are benign vascular neoplasms that are most often seen in children. Seventy-five percent of lymphangiomas occur in the neck, 20% occur in the axilla, and the remaining 5% are found in many other locations.[1] Intra-abdominal lymphangiomas are rare and are most commonly located in the mesentery, omentum, mesocolon, and retroperitoneum.[2] Some patients present acutely with intestinal obstruction, volvulus, infarction, bleeding, or infection, whereas others present with increasing abdominal girth, vague discomfort, and pain.[2,3,4,5,6]

CASE PRESENTATION

A 22-years-old adult male presented to us with paraumbilical abdominal pain of 8 days duration, the pain was sudden in onset, radiated to back, constricting in nature, constant, gradually increasing in severity, interferes with patient's activity and sleeping. There

*Elayyan Al Sarsour, MD, Department of General Surgery, Al-Bashir Teaching Hospital, Amman, Jordan.
*Amer Hashim Hassan Al-Ani CABS, FICM (digestive surgery), Department of General Surgery, Al-Bashir Teaching Hospital, Amman, Jordan. E-mail:ameralqadi2002@yahoo.com.
*Tahani Alkharoof MD, Department of Pathology, Al-Bashir Teaching Hospital, Amman, Jordan.
*Mohammed Zaied, MD, Department of General Surgery, Al-Bashir Teaching Hospital, Amman, Jordan.

were no aggravating factors, but it was relieved by analgesia. There was no history of nausea, vomiting, jaundice, or diarrhea, no weight loss, no loss of appetite, no fever. Past medical and surgical history was free, there was no history of blood transfusion, family history was not significant. The patient was not known to have allergy to any drug, he is smoker of 1 pack/day for the last 4 years.

On examination, patient's general condition was good, he was afebrile, his heart rate was 88 per minute. Pallor was not present, there was no icterus, no oedema, no lymphadenopathy. His blood pressure was 108/66 mm of Hg, respiratory rate was 18, nothing was of significance on chest examination.

On abdomen examination, there was a big central bulge of about 26X14 cm in dimensions. No dilated veins over skin, no tenderness, liver and spleen were not palpable. The central abdominal bulge was of smooth surface, firm in consistency, scrotal, rectal and back examinations were all normal.

On percussion of the abdomen, there was dullness all over the mass, especially in the central part, surrounded by areas of resonance, transmitted thrill was present.

On investigation, the haemoglobin was 14.6 g/dl, platelets were ($228X10^3$/l), ESR was 35 (mm/hr), his blood sugar, blood urea, liver function tests and serum amylase all were within normal, his total serum protein was 77 g/l (albumin=42 g/l, globulin=35 g/l). Abdominal ultrasonography (U/S) (Figure 1) revealed a large pelvi-abdominal heterogeneous mass lesion with cystic contents and interseptations, it's size was 11X22 cm causing compression on the urinary bladder; there was no evidence of hepato-splenomegaly or lymphadenopathy.

Abdominal CT scan (Figure 2) showed a cystic lesion in the peritoneal cavity, the size of the cyst was about 26X12 cm pushing the bowel away, enlarged lymph nodes were not seen.

A differential diagnosis of mesenteric cyst, omental cyst or retroperitoneal cyst was put in mind, and the decision was to proceed and operate upon the patient to excise the cyst in Toto. On opening the abdomen there was a big mesenteric cyst which was arising from the mesentery of the small bowel, there was also a duplication of the small bowel at about 100 cm from the dudeno-jejunal junction (Figure 3). The cyst was excised completely. The cyst was 14X26 cm in size and 5.3 kg in weight (Figure 4), post operative period was uneventful.

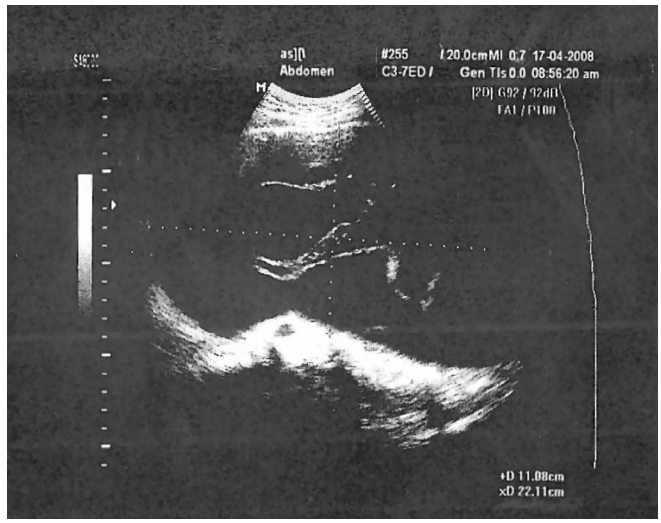

Figure 1. Abdominal U/S revealed a large pelvi-abdominal heterogeneous mass lesion with cystic contents and interseptations.

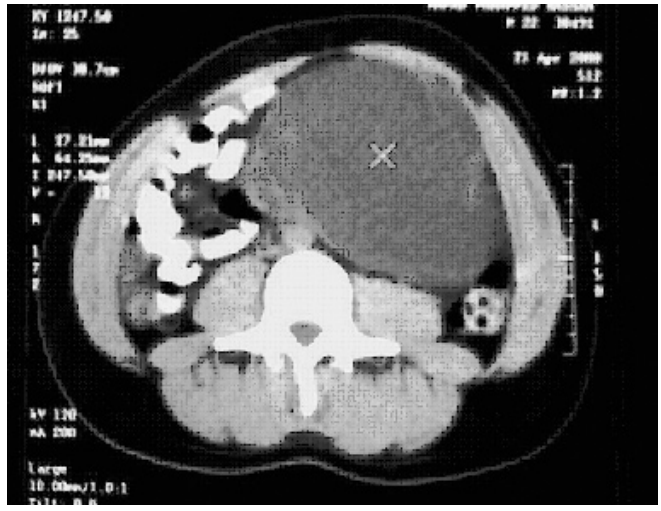

Figure 2. Abdominal CT scan showing cystic lesion in the peritoneal cavity, pushing the bowel away, lymph nodes were not seen.

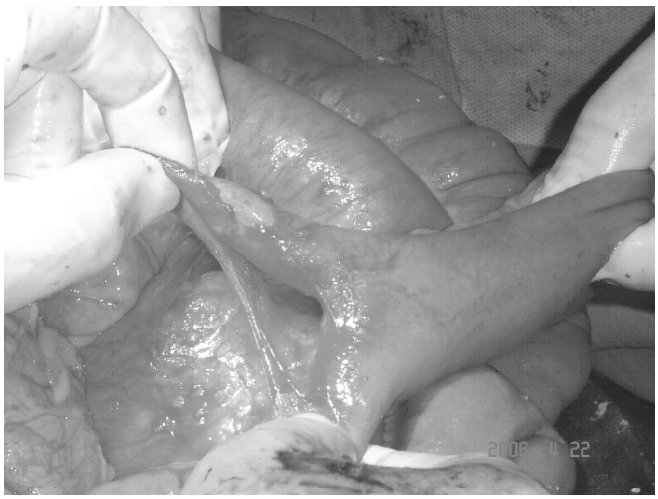

Figure 3. A duplication of the small bowel at about 100 cm from the dudeno-jejunal junction.

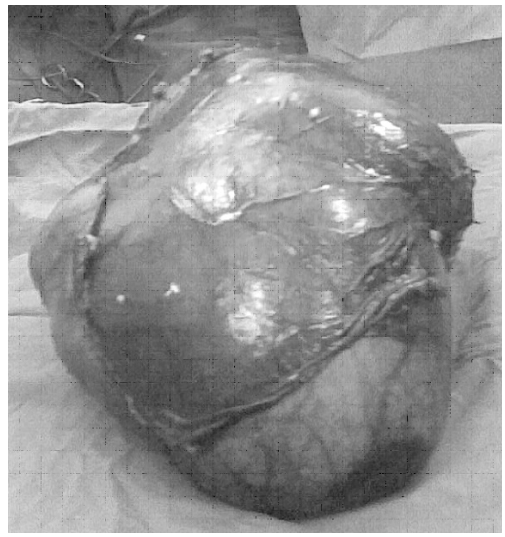

Figure 4. The cyst was 14X26 cm in size and 5.3 kg in weight.

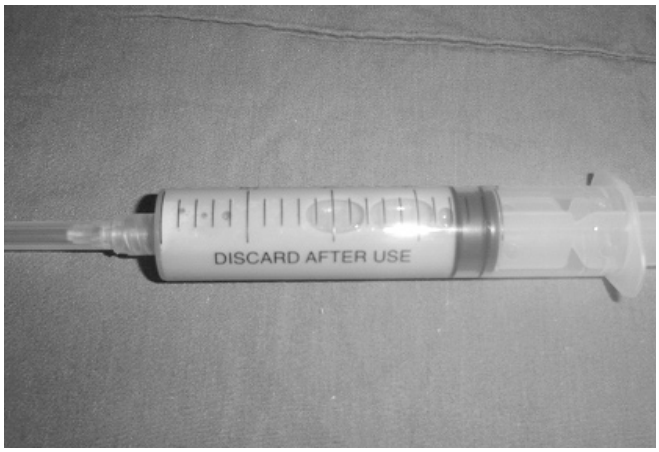

Figure 5. The cyst contains milky fluid.

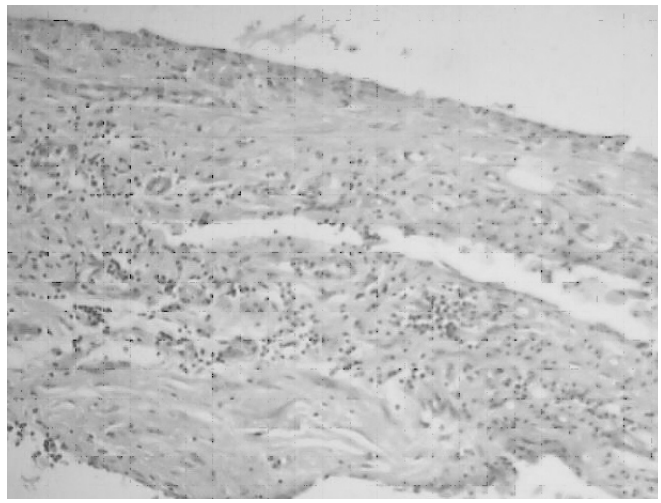

Figure 6. Cyst wall composition.

The gross description of the lesion in the histopathology report was "oval intact brown colored cyst with smooth outer surface measuring 26X14X12 cm, it contains milky fluid (Figure 5), the cyst wall thickness ranges from 0.2 cm to 1.8 cm, while the microscopical description was "section show cyst wall composed of fibrous tissue, residual smooth muscle fibers, chronic inflammatory cells, the thickened area shows multiple small and large spaces lined by flattened endothelial cells, lumina filled with foamy macrophages, between the spaces, there are dense lympho plasma cells infiltrated and macrophages, features are consistent with cystic lymphangioma" (Figure 6).

DISCUSSION

One of the developmental malformations of lymphatic tissue is cystic lymphangioma.[1] According to Ross, cystic lymphangioma is a type of mesenteric cyst.[2] Benevieri in 1507 was the first to describe a mesenteric cyst,[3] while the first description of a chylous mesenteric cyst was recorded by Rokitansky in 1842.[4] The age distribution trends toward younger patients,

70% of which are younger than 30 years. All ages are affected; however, with cases documented in utero and in the elderly.[5] Cystic lymphangiomas are preferentially located in the head, neck, and axilla in children. However, lymphangiomas in the peritoneal cavity are extremely rare, particularly in adults.[6] They are occurring approximately in 1/200,000 - 350,000.[7] While it has been reported that the mesenteric cysts have an incidence of 1/100000 hospital admissions in adults and 1/20000 in children.[8] Lymphangiomas are invariably benign.[6] Approximately 830 cases of mesenteric cyst have been reported in the literature and only four of them were found to be malignant.[9] Only five cases of mesenteric cyst located in an inguinal hernia,[10] and one case of a strangulated umbilical hernia complicated with a mesenteric cyst [11] have been reported in the literature. Pathologically, mesenteric cysts vary in size and shape from a few centimeters to a size that can occupy the peritoneal cavity.[12] They can be single or multiple, uni or multiloculated. The color of the cyst contents can vary from clear or milky or dark brown depending on the location of the cyst and the presence of hemorrhage.[13] According to histopathological features, de PERROT classified mesenteric cysts into six groups:[8] lymphatic (simple lymphatic cyst and lymphangioma), mesothelial (simple mesothelial cyst, benign cystic mesothelioma, and malignant cystic mesothelioma), enteric (enteric cyst and enteric duplication), urogenital, matura cystic teratoma (dermoid cyst), and pseudocysts (infectious and traumatic cysts).[8]

Most cases of mesenteric cysts are asymptomatic.[14] They often attain large proportions before causing any symptoms. They can present with abdominal pain, weight loss and as an abdominal mass,[5] they may also present with acute symptoms secondary to complications such as obstruction (volvulus, extrinsic compression or entrapment in pelvis), rupture, and hemorrhage into cyst, infection or abscess formation.[15]

Fifty percent of mesenteric cysts are palpable on physical examination and are typically mobile transversely and not longitudinally.[12] They are tumors of the mesentery from duodenum till the rectum but are most commonly seen in the small bowel mesentery.[16] Ultrasonography and computed tomography are the best preoperative diagnostic tools.[17] They can be seen as well-outlined, non-enhancing near-water density abdominal masses on US. CT and MRI are helpful in the determination of the cystic content and their extension.[2] Laparoscopy can also be used as a safe and reliable method for localization and further characterization of the cyst.[12] The treatment of choice is complete surgical excision.[11,18,17] The first successful resection of a mesenteric cyst was performed by Tillaux in 1880 and a successful marsupialization of a mesenteric cyst was reported by Pean in 1883.[4] Partial small bowel resection or segmental colectomy is required in the treatment of the cases which transect the neighbouring bowel vessels and when it is impossible to separate the cyst from the intestine.[19,8,20] Resection can also be performed by laparoscopic techniques in patients who were diagnosed preoperatively.[21]

In 1993, Mackenzie described the first laparoscopic excision of a mesenteric cyst.[18] Open procedure must be preferred in cases with suspicion of malignancy and when resection seems impossible without opening the cyst.[21] Other treatment options include simple drainage or marsupilization that are associated with high rates of recurrence.[7]

CONCLUSIONS

Lymphangiomas in the peritoneal cavity are extremely rare, they may occur at any age, they are invariably benign, most cases are asymptomatic, but they may present with acute symptoms secondary to complications. Ultrasonography, computed tomography and MRI are the best diagnostic tools. Laparoscopy can also be used in the diagnosis and treatment. Yet open procedure must be preferred in cases with suspicion of malignancy and when resection seems impossible without opening the cyst. Other treatment options such as simple drainage or marsupilization are associated with high rates of recurrence.

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Selected Abstracts

Public Health

صحة عامة

Childhood Obesity, Other Cardiovascular Risk Factors, and Premature Death

دور البدانة في مرحلة الطفولة وعوامل الخطورة القلبية الوعائية الأخرى في حدوث الوفاة الباكرة

Franks PW, et al.
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Background: The effect of childhood risk factors for cardiovascular disease on adult mortality is poorly understood.

Methods: In a cohort of 4857 American Indian children without diabetes (mean age, 11.3 years; 12,659 examinations) who were born between 1945 and 1984, we assessed whether body-mass index (BMI), glucose tolerance, and blood pressure and cholesterol levels predicted premature death. Risk factors were standardized according to sex and age. Proportional-hazards models were used to assess whether each risk factor was associated with time to death occurring before 55 years of age. Models were adjusted for baseline age, sex, birth cohort, and Pima or Tohono O'odham Indian heritage.

Results: There were 166 deaths from endogenous causes (3.4% of the cohort) during a median follow-up period of 23.9 years. Rates of death from endogenous causes among children in the highest quartile of BMI were more than double those among children in the lowest BMI quartile (incidence-rate ratio, 2.30; 95% confidence interval [CI], 1.46 to 3.62). Rates of death from endogenous causes among children in the highest quartile of glucose intolerance were 73% higher than those among children in the lowest quartile (incidence-rate ratio, 1.73; 95% CI, 1.09 to 2.74). No significant associations were seen between rates of death from endogenous or external causes and childhood cholesterol levels or systolic or diastolic blood-pressure levels on a continuous scale, although childhood hypertension was significantly associated with premature death from endogenous causes (incidence-rate ratio, 1.57; 95% CI, 1.10 to 2.24).

Conclusions: Obesity, glucose intolerance, and hypertension in childhood were strongly associated with increased rates of premature death from endogenous causes in this population. In contrast, childhood hypercholesterolemia was not a major predictor of premature death from endogenous causes.

خلفية البحث: ما يزال تأثير عوامل الخطورة للأمراض القلبية الوعائية في فترة الطفولة على الوفيات عند البالغين من الأمور الغامضة إلى حد ما.

طرق البحث: تم إجراء دراسة أترابية شملت 4857 من الأطفال الهنود الأمريكيين غير السكريين (بمتوسط أعمار 11.3 سنة) من المولودين بين عامي 1945 و1984، حيث تم تقييم دور مشعر كتلة الجسم BMI، تحمل السكر، ضغط الدم ومستويات الكولسترول في التنبؤ المستقبلي بحدوث وفاة مبكرة. تم اعتماد عوامل الخطورة المعيارية تبعاً للعمر والجنس. تم استخدام نماذج الخطورة التناسبية لتقييم مدى ترافق كل من عوامل الخطورة المدروسة مع الزمن الفاصل لحدوث الوفاة قبل سن 55. تم تعديل هذه النماذج تبعاً للمشعرات القاعدية من حيث العمر، الجنس، مجموعة الولادة، الأصول الهندية Pima أو Tohono O'odham.

النتائج: لوحظ حدوث 166 وفاة لأسباب داخلية المنشأ (3.4% من الأتراب) خلال فترة المتابعة التي امتدت 23.9 سنة. لوحظ أن معدل الوفيات لأسباب داخلية المنشأ عند الأطفال ضمن الشريحة الربعية الأعلى لمشعر كتلة الجسم كان أكبر –بأكثر من ضعفين– بالمقارنة مع الأطفال ضمن الشريحة الربعية الدنيا لمشعر كتلة الجسم (نسبة معدل الحدوث 2.30، بفواصل ثقة 95%، 1.46–3.62). كما أن معدل الوفيات لأسباب داخلية المنشأ عند الأطفال ضمن الشريحة الربعية الأعلى لتحمل السكر كان أعلى بمقدار 73% بالمقارنة مع الأطفال ضمن الشريحة الربعية الدنيا لتحمل السكر (نسبة معدل الحدوث 1.73، بفواصل ثقة 95%، 1.09–2.74). لم يلاحظ وجود ترافق هام بين معدلات الوفيات لأسباب داخلية أو خارجية ومستويات الكولسترول عند الأطفال، أو مستويات الضغط الشرياني الانقباضي أو الانبساطي، وذلك على الرغم من وجود ترافق هام بين ارتفاع التوتر الشرياني خلال الطفولة

والوفاة المبكرة لأسباب داخلية المنشأ (نسبة معدل الحدوث 1.57، بفواصل ثقة 95%، 1.10–2.24).

الاستنتاجات: يوجد ترافق وثيق بين البدانة، عدم تحمل السكر، ارتفاع التوتر الشرياني خلال الطفولة وزيادة معدلات حدوث الوفاة الباكرة لأسباب داخلية المنشأ لدى هذه المجموعة. وعلى العكس لا تظهر زيادة كولسترول الدم في فترة الطفولة دوراً هاماً كعامل تنبؤي لحدوث الوفاة المبكرة لأسباب داخلية المنشأ.

Pediatrics

طب الإطفال

Clinical and Radiological Features of Rotavirus Cerebellitis

المظاهر السريرية والشعاعية لالتهاب المخيخ بالفيروسات العجلية

Takanashi J, et al.
AJNR Am J Neuroradiol 2010 May 27.

Background and Purpose: Neurological manifestations, such as benign convulsions and encephalitis/encephalopathy have been reported in patients with rotavirus gastroenteritis. However, cerebellitis has not attracted much attention. The purpose of this study was to identify and report the clinical and radiologic features of rotavirus cerebellitis.

Materials and Methods: Records of patients with rotavirus gastroenteritis exhibiting cerebellar lesions on MR imaging were collected from multiple centers in Japan. Their clinical, laboratory, and radiologic data were reviewed retrospectively.

Results: A diagnosis of acute cerebellitis concurrent with encephalitis was made for 11 of 13 patients identified. Two patients who were diagnosed as having injury due to hypovolemic shock were excluded from the study. All 11 patients with acute cerebellitis had disorders of consciousness with onset on days 2 to 4, followed by mutism in 10 patients. Other cerebellar symptoms included dysarthria following the mutism, hypotonia, ataxia, tremor, nystagmus, and dysmetria. MR imaging lesions in the vermis or cerebellar cortex were seen at some point (day 5 to 1 year) in 10 patients. A reversible splenial lesion (3 isolated and 3 with concurrent cerebellar lesions) was found in 6 patients scanned between days 4 and 6. Transient lesions in the cerebellar white matter/nuclei manifesting reduced diffusion were seen in 6 patients during days 5 through 7. The final MR imaging performed after 1 month showed cerebellar atrophy in 10 patients.

Conclusions: The 11 patients with rotavirus cerebellitis exhibited nearly identical clinical and MR imaging features. Involvement of the cerebellar white matter/nuclei may be associated with the mutism. An isolated splenial lesion with homogeneously reduced diffusion is not always a benign sign indicative of complete clinical and radiologic recovery in patients with rotavirus gastroenteritis.

خلفية وهدف البحث: تم إيراد حدوث تظاهرات عصبية مثل الاختلاجات السليمة والتهاب الدماغ/اعتلال الدماغ عند مرضى التهاب المعدة والأمعاء بالفيروسات العجلية Rotavirus، إلا أن التهاب المخيخ لم يستحوذ على الكثير من الانتباه. تهدف هذه الدراسة إلى تعريف وعرض المظاهر السريرية والشعاعية لالتهاب المخيخ بالفيروسات العجلية.

المواد وطرق البحث: تم جمع سجلات مرضى التهاب المعدة والأمعاء بالفيروسات العجلية Rotavirus الذين أظهروا آفات في المخيخ بالتصوير بالرنين المغناطيسي MRI من عدة مراكز في اليابان. تمت مراجعة المعطيات السريرية، المخبرية والموجودات الشعاعية لكل حالة بشكل راجع.

النتائج: تم وضع تشخيص التهاب مخيخ حاد مرافق لالتهاب دماغ عند 11 من 13 مريضاً. تم استبعاد مريضين من الدراسة لتشخيص حالتهما بكونها أذية ناتجة عن صدمة بنقص حجم الدم. لوحظ لدى جميع مرضى التهاب المخيخ الحاد (11 مريضاً) وجود اضطرابات في الوعي بدأت في اليوم 2-4 للحالة، تبعها صمات (رفض الكلام mutism) عند 10 مرضى. تضمنت الأعراض المخيخية الأخرى الملاحظة عسرة اللفظ (الرتة dysarthria) تبعها

صمات، نقص التوتر hypotonia، رنح، رعاش، رأرأة وخلل القياس dysmetria. لوحظ وجود آفات من خلال التصوير بالرنين المغناطيسي في الدودة vermis أو قشر المخيخ (بدءً من اليوم الخامس وحتى سنة من الإصابة) عند 10 مرضى. لوحظ وجود آفات شريطية عكوسة (3 معزولة و 3 مرافقة للآفات المخيخية) عند 6 مرضى تم تصويرهم في الأيام 4-6. لوحظت آفات عابرة في المادة المخيخية البيضاء/النوى المخيخية تظاهرت بنقص في الانتشار عند 6 مرضى خلال الأيام 5-7. أظهر التصوير النهائي بالرنين المغناطيسي المجرى بعد شهر من الإصابة وجود ضمور مخيخي عند 10 مرضى.

الاستنتاجات: أظهر جميع مرضى التهاب المخيخ بالفيروسات العجلية (11 مريضاً) موجودات سريرية وشعاعية متطابقة تقريباً. إن إصابة المادة البيضاء المخيخية/النوى المخيخية قد تترافق مع الصمات mutism. إن وجود آفة شريطية معزولة مع نقص متجانس في الانتشار لا يعتبر إشارة إيجابية للشفاء السريري والشعاعي بشكل دائم في حالات التهاب المعدة والأمعاء بالفيروسات العجلية.

Serum Albumin Level Predicts Initial Intravenous Immunoglobulin Treatment Failure in Kawasaki Disease

فائدة مستويات الألبومين المصلية في التنبؤ بفشل المعالجة بالغلوبيولينات المناعية عبر الوريد IVIG في حالات داء كاوازاكي

Kuo HC, et al.
Acta Paediatr 2010 May 19.

Objectives: Kawasaki disease (KD) is a systemic vasculitis primarily affecting children who are less than 5 years old. Intravenous immunoglobulin (IVIG) is the standard therapy for KD. However, many KD patients still show poor response to initial IVIG treatment. This study was conducted to investigate the risk factors for initial IVIG treatment failure in KD.

Methods: Children who met KD diagnosis criteria and were admitted for IVIG treatment were retrospectively enrolled for analysis. Patients were divided into IVIG-responsive and IVIG-resistant groups. Initial laboratory data before IVIG treatment were collected for analysis.

Results: A total of 131 patients were enrolled during the study period. At 48 h after completion of initial IVIG treatment, 20 patients (15.3%) had an elevated body temperature. Univariate analysis showed that patients who had initial findings of high neutrophil count, abnormal liver function, low serum albumin level (≤2.9 g/dL), and pericardial effusion were at risk for IVIG treatment failure. Multivariate analysis with a logistic regression procedure showed that serum albumin level was considered the independent predicting factor of IVIG resistance in KD patients (P=0.006, OR=40, 95% CI: 52.8-56.2). There was no significant correlation between age, gender, fever duration before IVIG treatment, hemoglobin level, total leukocyte and platelet counts, C-reactive protein level, or sterile pyuria and initial IVIG treatment failure. The specificity and sensitivity for prediction of IVIG treatment failure in this study were 96% and 34%, respectively.

Conclusion: Pre-IVIG treatment serum albumin levels are a useful predictor of IVIG resistance in KD patients.

هدف البحث: يعتبر داء كاوازاكي KD التهاباً في الأوعية الجهازية يصيب الأطفال دون سن الخامسة بشكل خاص. تعتبر المعالجة بالغلوبيولينات المناعية عبر الوريد IVIG المعالجة المعيارية لهذا الداء، ولكن ما زال الكثير من مرضى داء كاوازاكي يظهرون استجابة ضعيفة لهذه المعالجة. تهدف هذه الدراسة إلى استقصاء عوامل الخطورة المرافقة لفشل المعالجة بالغلوبيولينات المناعية عبر الوريد IVIG في حالات داء كاوازاكي.

طرق البحث: تم بشكل راجع دراسة مجموعة من الأطفال الذين حققت حالتهم المعايير التشخيصية لداء كاوازاكي والذين قبلوا لإعطاء معالجة بالغلوبيولينات المناعية عبر الوريد IVIG. تم تقسيم المرضى إلى مجموعتين: الأولى مجموعة حدوث استجابة للمعالجة، والثانية مجموعة المقاومة للمعالجة. تم جمع المعطيات المخبرية الأولية قبل المعالجة لإجراء التحليل اللازم.

النتائج: تم خلال فترة الدراسة قبول 131 مريضاً. لوحظ بعد 48 ساعة من إتمام المعالجة البدئية بالغلوبيولينات المناعية عبر الوريد IVIG تطور ارتفاع في حرارة الجسم لدى 20 مريضاً (بنسبة 15.3%). أظهر التحليل وحيد المتغير أن الموجودات البدئية التالية عند المريض والتي تشمل ارتفاع تعداد

العدلات، شذوذات وظائف الكبد، انخفاض مستويات الألبومين في المصل (≥2.9 غ/دل) ووجود انصباب تامور تترافق مع خطورة عالية لفشل المعالجة بالغلوبيولينات المناعية عبر الوريد. أظهر التحليل متعدد المتغيرات مع التقهقر المنطقي أن مستويات الألبومين في المصل تعتبر عامل تنبؤي مستقل لفشل المعالجة بالغلوبيولينات المناعية عبر الوريد عند مرضى داء كاوازاكي (p=0.006، نسبة الأرجحية OR=40، بفواصل ثقة 95%: 52.8-56.2). لم يلاحظ وجود ارتباط هام بين العمر، الجنس، مدة الحمى قبل البدء بالعلاج بالغلوبيولينات المناعية، مستوى خضاب الدم، تعداد الكريات البيضاء والصفيحات الدموية، مستوى البروتين الارتكاسي C، أو وجود بيلة قيحية عقيمة وفشل المعالجة بالغلوبيولينات المناعية عبر الوريد. بلغت نوعية وحساسية التنبؤ بفشل المعالجة بالغلوبيولينات المناعية عبر الوريد IVIG في هذه الدراسة 96% و34% على الترتيب.

الاستنتاجات: تعتبر مستويات الألبومين المصلية المسجلة قبل المعالجة بالغلوبيولينات المناعية عبر الوريد IVIG عاملاً مفيداً في التنبؤ بمقاومة الداء لهذه المعالجة في حالات داء كاوازاكي.

Antenatal Indomethacin Tocolysis is Associated With An Increased Need for Surgical Ligation of Patent Ductus Arteriosus in Preterm Infants

استخدام عقار indomethacin قبل الولادة لحل المخاض يترافق مع زيادة الحاجة للربط الجراحي للقناة الشريانية السالكة لدى المواليد الخدج

Soraisham AS, et al.
J Obstet Gynaecol Can 2010 May;32(5):435-42.

Objective: To examine the effect of antenatal indomethacin (AI) exposure on the incidence, response to postnatal indomethacin (PI), and need for surgical ligation of patent ductus arteriosus (PDA) in preterm infants.
Methods: We performed a retrospective matched cohort study of infants born at </= 30 weeks' gestation after exposure to AI administered because of preterm labour. Control subjects were infants unexposed to AI but with similar gestational age and birth weight. We compared the incidence of PDA, response to treatment with PI, and surgical PDA ligation rate between the two groups.
Results: There was no difference in the incidence of PDA between AI infants (67.6%) and control subjects (66.6%). Only 22 of 54 (41%) infants in the AI group responded to PI therapy for symptomatic PDA closure, compared to 34 of 52 (65%) infants in the control group (P=0.012). Thirty-two (59%) infants in the AI group required surgical PDA ligation after indomethacin therapy, compared with 18 infants in the control group (35%) (P=0.01). Multivariate logistic regression analysis showed that AI exposure was independently associated with surgical ligation of PDA (adjusted odds ratio 3.07; 95% CI 1.46 to 6.45).
Conclusion: In infants born preterm (</= 30 weeks) with a PDA, antenatal exposure to indomethacin was associated with an increased rate of therapeutic failure of PI and an increased rate of surgical PDA ligation compared with controls without such antenatal exposure.

هدف البحث: دراسة تأثير التعرض لعقار indomethacin في الفترة ما قبل الولادة على معدلات الحاجة لإجراء الربط الجراحي والاستجابة لإعطاء indomethacin بعد الولادة في معالجة القناة الشريانية السالكة PDA.
طرق البحث: تم إجراء دراسة أترابية راجعة على المواليد بعمر حمل ≥30 أسبوعاً بعد تعرض لعقار indomethacin قبل الولادة بهدف معالجة حالة مخاض باكر لدى الأم. شملت مجموعة الشاهد مواليد لم يتعرضوا لعقار indomethacin قبل الولادة مماثلين من ناحية العمر الحملي ووزن الولادة. تمت مقارنة معدلات حدوث القناة الشريانية السالكة PDA، الاستجابة للمعالجة بـ indomethacin بعد الولادة، معدل الحاجة لإجراء ربط جراحي للقناة بين المجموعتين.
النتائج: لم يلاحظ وجود فارق هام في حدوث القناة الشريانية السالكة بين مجموعة المرضى (67.6%) ومجموعة الشاهد (66.6%). لوحظ حدوث استجابة (انغلاق القناة الشريانية العرضية) للمعالجة بـ indomethacin بعد الولادة لدى 22 فقط من أصل 54 رضيعاً (41%) في مجموعة التعرض لعقار indomethacin قبل الولادة، وذلك بالمقارنة مع استجابة لدى 34 من أصل 52 (65%) عند الرضع في مجموعة الشاهد غير المتعرضين لعقار indomethacin قبل الولادة (p=0.012). احتاج ثلثا الرضع (59%) في مجموعة التعرض لعقار indomethacin قبل الولادة لإجراء ربط جراحي

للقناة الشريانية السالكة بعد المعالجة بـ indomethacin، بالمقارنة مع 18 فقط (35%) في مجموعة الشاهد (p=0.01). أظهر تحليل التقهقر المنطقي متعدد المتغيرات أن التعرض لعقار indomethacin قبل الولادة ترافق بشكل مستقل مع الحاجة للربط الجراحي للقناة الشريانية السالكة (نسبة الأرجحية المعدلة 3.07، بفواصل ثقة 95%، 1.46-6.45).

الاستنتاجات: يلاحظ لدى المواليد الخدج (بعمر حمل ≥30 أسبوعاً) ذوو القناة الشريانية السالكة PDA أن التعرض لعقار indomethacin قبل الولادة يترافق مع زيادة معدلات فشل معالجة القناة الشريانية السالكة لديهم باستخدام indomethacin بعد الولادة، وزيادة الحاجة لإجراء الربط الجراحي للقناة بالمقارنة مع مجموعة الشاهد غير المتعرضين لعقار indomethacin قبل الولادة.

Role of Emerging Respiratory Viruses in Children With Severe Acute Wheezing

دور الفيروسات التنفسية الناشئة في الحالات الشديدة من الأزيز الحاد عند الأطفال

Calvo C, et al.
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Background: Acute wheezing episodes are frequently associated with respiratory viral infections in children. However, the role of the recently described respiratory viruses is not yet fully understood.
Objective: The main objective of this study was to estimate the frequency of human metapneumovirus (HMPV), human bocavirus (HBoV), and 14 other respiratory viruses in hospitalized children with acute wheezing.
Methods: A prospective study was conducted on children <14 years old, admitted with an acute expiratory wheezing episode from September 2005 to June 2008. Viruses were detected in nasopharyngeal aspirates by polymerase chain reaction. Clinical data were prospectively recorded.
Results: A viral pathogen was identified in 444 (71%) out of 626 hospitalized acute wheezing episodes. Respiratory syncytial virus (RSV) was the most frequently detected (27%), followed by rhinovirus (24%), adenovirus (17.8%), HBoV (16%), and HMPV (4.7%). The rate of viral detection was significantly higher in infants (77.3%), than in older children (59.8%) (p<0.001). RSV and HBoV were more prevalent in infants (p<0.001) than in older children.
Conclusions: The most prevalent viruses found in severe acute wheezing episodes were RSV and rhinovirus not only in childhood, but also in infancy. However, other emerging viruses such as HBoV and metapneumovirus also play an important role in wheezing episodes.

خلفية البحث: تترافق نوب الأزيز الحاد عند الأطفال مع الالتهابات التنفسية الفيروسية بشكل كثير التوارد، إلا أن دور الفيروسات التنفسية المكتشفة مؤخراً في هذا الموضوع ما يزال بحاجة للمزيد من الفهم.
هدف البحث: يهدف هذا البحث إلى تقدير تواتر الفيروسات الرئوية البشرية (human metapneumovirus HMPV)، وفيروسات bocavirus البشرية (HBoV)، و14 من الفيروسات التنفسية الأخرى في حالات الأزيز الحاد عند الأطفال المقبولين في المشفى.
طرق البحث: تم إجراء دراسة مستقبلية على الأطفال دون سن 14 سنة المقبولين بنوب أزيز زفيري حاد في الفترة من أيلول 2005 وحتى حزيران 2008. تم كشف الفيروسات في رشافة البلعوم الأنفي من خلال تفاعل سلسلة البوليميراز PCR. تم تسجيل المعطيات السريرية حول كل حالة بشكل مستقبلي.
النتائج: تم كشف وجود عنصر ممرض فيروسي في 444 حالة من أصل 626 من المقبولين بحالة أزيز حاد (بنسبة 71%). لوحظ أن الفيروسات المخلوية التنفسية RSV هي الأكثر تواتراً من بين العناصر الفيروسية المعزولة (بنسبة 27%)، تليها الفيروسات الأنفية (24%)، الفيروسات الغدية (17.8%)، فيروسات bocavirus البشرية (HBoV) (بنسبة 16%)، والفيروسات البشرية الرئوية HMPV (4.7%). لوحظ أن معدل كشف الفيروسات أعلى لدى وبشكل هام عند الرضع (77.3%) بالمقارنة مع الأطفال الأكبر سناً (59.8%) (p<0.001)، كما أن توارد فيروسات RSV وHBoV كان أعلى أيضاً لدى الرضع مقارنةً بالأطفال الأكبر سناً (p<0.001).
الاستنتاجات: تعتبر الفيروسات المخلوية التنفسية RSV والفيروسات الأنفية الفيروسات الأكثر تواتراً في الحالات الشديدة من الأزيز الحاد ليس فقط في فترة الطفولة، بل وحتى في فترة سن الرضاع. يمكن لفيروساتٍ أخرى مثل فيروسات bocavirus البشرية (HBoV) والفيروسات البشرية الرئوية HMPV أن تلعب أيضاً أدواراً هامةً في نوب الأزيز.

Obstetrics And Gynecology

التوليد والإمراض النسائية

Metabolic Parameters and Perinatal Outcomes of Gestational Diabetes Mellitus in Women With Polycystic Ovary Syndrome

الثوابت الاستقلابية ونتائج الفترة ما حول الولادة لحالات الداء السكري الحملي عند مريضات متلازمة المبيض متعدد الكيسات

Li G, et al.
J Perinat Med 2010 Feb 11.

Aims: To investigate metabolic characteristics and perinatal outcomes of gestational diabetes mellitus (GDM) in women with polycystic ovary syndrome (PCOS).
Methods: We evaluated 34 GDM in women with PCOS and 70 GDM in women without PCOS in this prospective study. All GDM women were treated with medical nutrition therapy (MNT). Pre-pregnancy clinical data, fasting glucose, fasting insulin (FINS), blood lipid, homeostasis model assessment index of insulin resistance (HOMA-IR) and perinatal outcomes were investigated.
Results: GDM in women with PCOS had higher pre-pregnancy body mass index (BMI), higher incidence of overweight than in the non-PCOS group (each P<0.001). Incidence of history of infertility was also significantly higher in the PCOS group than in the non-PCOS group (20.6% vs. 2.9%, P<0.01). A higher incidence of early pregnancy loss (EPL) was found in the PCOS group than in the non-PCOS group (20.6% vs. 7.1%, P<0.05). Significantly higher in vitro fertilization and embryo transfer (IVF-ET) rate and insulin administration was also observed in the PCOS group than in the controls. No significant difference was found in the prevalence of preeclampsia, premature delivery, macrosomia, fetal death and neonatal congenital anomaly between GDM in women with and without PCOS (all P<0.05).
Conclusions: Compared with the controls, no significant increase in the incidence of adverse perinatal outcomes was detected in GDM in women with PCOS by appropriate management.

هدف البحث: استقصاء الخصائص الاستقلابية ونتائج الفترة ما حول الولادة لحالات الداء السكري الحملي GDM عند النساء المصابات بمتلازمة المبيض متعدد الكيسات PCOS.
طرق البحث: تم في هذه الدراسة المستقبلية تقييم حالة 34 من مريضات السكري الحملي المصابات بمتلازمة المبيض متعدد الكيسات PCOS و 70 حالة أخرى لمريضات سكري حملي دون وجود هذه المتلازمة. تمت معالجة جميع مريضات السكري الحملي بالمعالجة الغذائية الطبية MNT. تم استقصاء البيانات السريرية قبل الحمل، مستوى السكر الصيامي، مستوى الأنسولين الصيامي FINS، شحوم الدم، مشعر تقييم الاستتباب لمقاومة الأنسولين HOMA-IR، بالإضافة إلى النتائج الملاحظة في الفترة ما حول الولادة.
النتائج: لوحظ أن مريضات الداء السكري الحملي المصابات بمتلازمة المبيض متعدد الكيسات لديهن قيماً أعلى لمشعر كتلة الجسم BMI قبل الحمل، كما أن لديهن حدوث أعلى لزيادة الوزن بالمقارنة مع مجموعة المريضات غير المصابات بمتلازمة المبيض متعدد الكيسات (p<0.001 لكل منهما). أيضاً لوحظ أن وجود قصة عقم كان أعلى وبشكل هام لدى مجموعة مريضات متلازمة المبيض متعدد الكيسات بالمقارنة مع حالة عدم وجود هذه الملازمة (20.6% مقابل 2.9%، p<0.01). من جهة أخرى لوحظ توارد أعلى للفقدان الباكر لمحصول الحمل EPL عند مجموعة مريضات متلازمة المبيض متعدد الكيسات بالمقارنة مع حالة عدم وجودها (20.6% مقابل 7.1%، p<0.05). لوحظت معدلات أعلى للتخصيب في الزجاج ونقل الأجنة IVF-ET وإعطاء الأنسولين لدى مجموعة مريضات المبيض متعدد الكيسات بالمقارنة مع حالات الشاهد. لم يلاحظ وجود فروقات هامة من حيث انتشار حالة ما

قبل الإرجاج، الولادة المبكرة، العملقة macrosomia، موت الجنين والتشوهات الولادية عند حديثي الولادة عند مريضات الداء السكري الحملي بوجود أو عدم وجود متلازمة المبيض متعدد الكيسات (p<0.05 لجميع البنود السابقة).

الاستنتاجات: لوحظ بالمقارنة مع حالات الشاهد عدم وجود زيادة هامة في حدوث التأثيرات السلبية ما حول الولادة عند مريضات الداء السكري الحملي بوجود متلازمة المبيض متعدد الكيسات عند القيام بالتدبير المناسب للحالة.

Predicting Risk of Malignancy in Adnexal Masses

التنبؤ بخطر وجود خباثة في حالات كتل الملحقات

McDonald JM, et al.
Obstet Gynecol 2010 Apr;115(4):687-94.

Objective: To estimate the accuracy of preoperative ultrasonography, serum CA 125, and patient demographics as a means of predicting risk of malignancy in women with a ultrasonographically confirmed adnexal mass.

Methods: Tumor morphology derived from ultrasonographic images, tumor size, tumor bilaterality, serum CA 125, and patient demographics were evaluated preoperatively in 395 patients undergoing surgery from 2001 to 2008. Tumor morphology was classified as complex, solid, or cystic. Preoperative findings were compared with tumor histologic findings at the time of surgery. Multivariable classification and regression tree analysis were used to identify a group of patients at high risk of ovarian malignancy.

Results: One hundred eighteen patients had ovarian cancer, 13 patients had ovarian tumors of borderline malignancy, and 264 had benign ovarian tumors. Multivariable classification and regression tree analysis defined women at high risk of ovarian malignancy as those with an adnexal mass having complex or solid morphology and a serum CA 125 value greater than 35 units/ml. This definition had a positive predictive value of 84.7% and a negative predictive value of 92.4% and correctly identified 77.3% of patients with stage I and stage II ovarian cancer and 98.6% of patients with stage III and stage IV ovarian cancer.

Conclusion: Patients with solid or complex ovarian tumors and an elevated serum CA 125 level (greater than 35 units/ml) are at high risk of ovarian malignancy.

هدف البحث: تقدير دقة التصوير بالأمواج فوق الصوتية (الإيكو) قبل الجراحة، مستويات CA 125 في المصل والمعطيات السكانية للمرضى كوسيلة في تقدير خطر الخباثة في حالات وجود كتلة في الملحقات مثبتة بالإيكو.

طرق البحث: تم إجراء تقييم قبل الجراحة للمعطيات الشكلية للورم من خلال الصور المأخوذة بالإيكو، كما تم تقييم حجم الورم، وجود ورم ثنائي الجانب، مستويات CA 125 في المصل والمعطيات السكانية لكل حالة عند 395 من المريضات اللواتي خضعن للجراحة خلال الفترة بين عامي 2001–2008. تم تصنيف الورم من الناحية الشكلية بكونه معقد، صلب أو كيسي. تمت مقارنة الموجودات الملاحظة قبل الجراحة مع الموجودات النسيجية الملاحظة عند الجراحة. تم استخدام التصنيف متعدد المتغيرات وتحليل شجرة التقهقر لتحديد مجموعة المريضات ذوات الخطورة العالية لوجود خباثة في المبيض.

النتائج: تبين وجود سرطان مبيض عند 118 مريضة، كما لوحظ وجود أورام مبيضية ذات خباثة حدية عند 13 مريضة، في حين لوحظ وجود أورام مبيضية سليمة عند 264 مريضة. تم من خلال التصنيف متعدد المتغيرات وتحليل شجرة التقهقر تحديد مجموعة المريضات ذوات الخطورة العالية لوجود خباثة في المبيض على الشكل التالي: وجود كتلة معقدة أو صلبة من الناحية الشكلية في الملحقات، مستوى CA 125 في المصل أعلى من 35 وحدة/مل. بلغت القيمة التنبؤية الإيجابية لهذا التعريف 84.7%، في حين بلغت القيمة التنبؤية السلبية 92.4%، كما سمح هذا التعريف بتحديد دقيق لـ 77.3% من مرضى المراحل I و II من سرطان المبيض، و98.6% من مرضى المراحل III و VI من سرطان المبيض.

الاستنتاجات: تبين أن مريضات الأورام المبيضية المعقدة أو الصلبة المترافقة مع ارتفاع في مستوى CA 125 في المصل (أعلى من 35 وحدة/مل) هن فئة عالية الخطورة لوجود خباثة في المبيض.

Complete Surgery for Low Rectal Endometriosis

الاستئصال الجراحي الكامل لبطانة الرحم الهاجرة في أسفل المستقيم

Dousset B, et al.
Ann Surg 2010 May;251(5):887-95.

Objective: We conducted a prospective study to assess the long-term results of complete surgery for low rectal endometriosis (LRE), paying particular attention to surgical complications, functional results, and disease recurrence after a follow-up of at least 5 years.

Summary Background Data: Deep infiltrating endometriosis (DIE) may infiltrate the midlow rectum and lead to severe pelvic pain. Complete resection of LRE is reluctantly considered by young women of childbearing age.

Methods: From 1995 to 2003, 100 women with severe pelvic pain and previous incomplete surgery (n=82) underwent complete open surgery for LRE after thorough preoperative imaging work-up. This included total or subtotal rectal excision with combined resection of all extrarectal endometriotic lesions. Univariate analysis of predictive factors for transient neurogenic bladder and surgical complications was performed. Mean follow-up was 78+/-15 months.

Results: All patients underwent rectal resection with straight coloanal (n=16) or low colorectal anastomosis (n=84). A concomitant extrarectal procedure was required in all instances, including gynecologic procedures (n=100), additional intestinal (n=45), and urologic (n=23) resections. A fertility-preserving procedure was possible in 92% of the patients. Mean numbers of DIE and endometriotic lesions were 3.9+/-1.4 and 5.5+/-1.6 per patient, respectively. There were no deaths and the surgical morbidity rate was 16%. Sixteen patients developed a transient peripheral neurogenic bladder, which was more frequently observed after colonanal anastomosis (P<0.001) or concomitant hysterectomy (P<0.01) and in patients with more than 4 DIE lesions (P<0.05). At last follow-up, 94 patients had complete (n=83) or very satisfactory (n=11) relief of symptoms. Urine voiding and fecal continence was satisfactory in all cases. There was no recurrence of colorectal and/or urologic endometriosis and the overall DIE recurrence rate was 2%.

Conclusions: Complete surgery for LRE provides excellent long-term functional results in 94% of the patients, provided all extraintestinal endometriotic lesions are resected during the same surgical procedure. In that setting, the overall 5-year recurrence rate is very low.

هدف البحث: تم إجراء دراسة مستقبلية لتقييم النتائج طويلة الأمد للاستئصال الجراحي الكامل لبطانة الرحم الهاجرة (الإندومتريوز) في أسفل المستقيم LRE، مع التأكيد على الاختلاطات الجراحية، النتائج الوظيفية الملاحظة ونكس الداء خلال فترة المتابعة الممتدة لخمس سنوات على الأقل.

خلاصة المعطيات التمهيدية: يمكن للإندومتريوز ذو الارتشاح العميق DIE أن يرتشح ضمن القسم المتوسط السفلي من المستقيم مسبباً ألماً حوضياً شديداً. يتم اللجوء للاستئصال الجراحي الكامل للإندومتريوز في أسفل المستقيم LRE كخيار علاجي أخير وخاصة عند النساء في سن الإنجاب.

طرق البحث: تم خلال الفترة الممتدة بين عامي 1995 و2003 دراسة حالة 100 من النساء اللواتي يعانين من ألم حوضي شديد خضع 82 منهن لجراحة غير كاملة سابقاً، خضعت المريضات إلى جراحة كاملة مفتوحة لاستئصال الإندومتريوز في أسفل المستقيم LRE وذلك بعد إجراء تقييم شامل للحالة قبل الجراحة من خلال الاستقصاءات الشعاعية. تضمنت الجراحة استئصال تام أو تحت تام للمستقيم مع استئصال جميع آفات الإندومتريوز خارج المستقيم. تم إجراء التحليل وحيد المتغير للعوامل التنبؤية لحدوث المثانة العصبية العابرة والاختلاطات الجراحية الأخرى. بلغ متوسط فترة المتابعة 78±15 شهراً.

النتائج: خضعت جميع المريضات لاستئصال مستقيم مع مفاغرة مباشرة كولونية شرجية (في 16 حالة) أو مفاغرة كولونية مستقيمية سفلية (84 حالة). تطلبت جميع الحالات ضرورة إجراء تداخلات أخرى غير مستقيمية من ضمنها تداخلات نسائية (100 حالة)، تداخلات استئصالية إضافية معوية (45 حالة) أو بولية (23 حالة). تم القيام بتداخلات محافظة على الخصوبة في 92% من الحالات. بلغ متوسط عدد آفات الإندومتريوز عميقة الارتشاح DIE وآفات الإندومتريوز 3.9±1.4 و5.5±1.6 لكل مريضة على الترتيب. لم يسجل حدوث أية وفيات كما بلغ معدل المراضة الجراحية 16%. تطور لدى 16 مريضة مثانة عصبية محيطية عابرة لوحظت بشكل أكثر تواتراً في حالات تطبيق المفاغرة الكولونية الشرجية (p<0.001)، أو إجراء استئصال رحم بالتزامن مع استئصال الإندومتريوز (p<0.01)، أو عند تجاوز عدد آفات الإندومتريوز عميقة الارتشاح DIE لـ 4 آفات (p<0.05). لوحظ خلال المراحل الأخيرة من فترة المتابعة حدوث ترجع تام للأعراض عند 83 مريضة، وتراجع مرضٍ إلى حدٍ كبير عند 11 مريضة. لوحظت وظيفة طبيعية

للتبول والاستمساك البرازي في جميع الحالات. لم تسجل حالات نكس للإندومتريوز في الكولون والمستقيم و/أو الجهاز البولي، كما بلغ المعدل الإجمالي لنكس الآفات عميقة الارتشاح DIE 2%.

الاستنتاجات: تقدم الجراحة الكاملة لآفات الإندومتريوز في أسفل المستقيم LRE نتائج وظيفية ممتازة على المدى البعيد عند 94% من المرضى عند التأكد من استئصال جميع الآفات خارج المعوية خلال إجراء التداخل. وعند تطبيق ذلك فإن معدلات النكس الإجمالية بعد 5 سنوات من المتابعة تكون قليلة جداً.

Laser Vaporization in the Management of CIN

استخدام الاستبخار بالليزر في تدبير حالات تنشؤات عنق الرحم ضمن البشرة

Vetrano G, et al.
Eur J Gynaecol Oncol 2010;31(1):83-6.

Aims: To evaluate the effectiveness of laser CO2 vaporization in high-grade cervical intraepithelial neoplasias and to assess the diagnostic reliability of cytology, colposcopy, microbiology and HPV tests in predicting recurrence in a long-term outcome.

Methods: Forty-four patients affectd by high-grade cervical intraepithelial neoplasia (HG-CIN) were submitted to laser CO2 vaporization and followed-up a minimum of five years. Vaginal smears for microbiological examination were detected. HPV testing was performed by polymerase chain reaction (PCR).

Results: The average age of the patients was 19.5 years (range 15-24). The cure rate after a single treatment was 95%. Two cases (5%) revealed HG-CIN persistence after three months. The five year follow-up of all cases submitted to a second laser procedure revealed negative cytologic and colposcopic findings.

Conclusions: A higher degree of expertise and experience from the colposcopist and long-term follow-up proves the effectiveness of laser vaporization in the management of CIN in young women. It has been suggested that HPV infection alone may not be sufficient to promote carcinogenesis and that other cofactors could be involved. Microbiological tests are important to identify and treat any inflammation which might represent a cofactor of HPV infection in the pathogenesis of cervical dysplasia. Cytocolposcopic long-term follow-up, microbiological and HPV tests can improve regression of disease.

هدف البحث: تقييم كفاءة استخدام الاستبخار بالليزر CO2 (المعالجة بالبخار) في معالجة تنشؤات عنق الرحم داخل البشرة CIN ذات الدرجة العالية، وتقييم الكفاءة (المعولية) التشخيصية للفحص الخلوي، تنظير المهبل، اختبارات الأحياء الدقيقة وفيروسات الأورام الحليمية البشرية (HPV) في التنبؤ بالنكس على المدى البعيد.

طرق البحث: خضعت 44 مريضة من مريضات تنشؤات عنق الرحم داخل البشرة عالية الدرجة إلى معالجة باستخدام الاستبخار بالليزر CO2 مع متابعة الحالات لمدة لا تقل عن 5 سنوات. تم إجراء لطاخات مهبلية لفحص الأحياء الدقيقة، كما تم إجراء اختبار فيروسات HPV باستخدام تفاعل سلسلة البوليميراز PCR.

النتائج: بلغ متوسط عمر المريضات 19.5 سنة (تراوح بين 15-24 سنة). بلغت نسبة الشفاء بعد جلسة علاجية واحدة 95%. أظهرت حالتان (بنسبة 5%) استمرار وجود التنشؤ عالي الدرجة داخل البشرة بعد 3 أشهر من المعالجة. أظهرت فترة المتابعة الممتدة لخمس سنوات لجميع الحالات التي خضعت لجلسة ثانية من المعالجة بالليزر سلبية في الفحص الخلوي وموجودات طبيعية بتنظير المهبل.

الاستنتاجات: أظهرت الدرجة العالية من المعرفة والخبرة بتنظير المهبل والمتابعة طويلة الأمد فعالية الاستبخار بالليزر CO2 (المعالجة بالبخار) في معالجة تنشؤات عنق الرحم داخل البشرة CIN عند اليافعات. لقد اقترح أن وجود إنتان بفيروس HPV قد لا يكون كافياً لوحده لتحريض عملية التسرطن، وهنا قد تتدخل عوامل أخرى مساعدة في هذا الأمر. تحتل اختبارات الأحياء الدقيقة أهمية خاصة في تحديد ومعالجة أية حالة التهابية قد تمثل عاملاً مساعداً للإنتان بفيروس HPV في إمراضية خلل التنسج في عنق الرحم. تفيد المتابعة طويلة الأمد بتنظير المهبل والفحص الخلوي، اختبارات الأحياء الدقيقة واختبارات فيروس HPV في تحسين تراجع المرض.

Surgery

الجراحة

Optimal Timing For Repair of An Inguinal Hernia in Premature Infants

التوقيت الأمثل لإصلاح الفتق الإربي عند المواليد الخدج

Vaos G, et al.
Pediatr Surg Int 2010 Feb 19.

Purpose: The aim of this study was to determine the optimal timing for inguinal herniotomy in premature infants treated in the neonatal intensive care unit.
Methods: A two-institutional-center retrospective study was performed including 41 prematures at gestational age 28-35 weeks who underwent herniotomy within 1 week of diagnosis [short-waiting group (SWG), median 5 days, n=25] or more than 1 week after diagnosis [long-waiting group (LWG), median 30.55 days, n=16]. Gestational age, birthweight, post-conceptional age at diagnosis, age at diagnosis, post-conceptional age at surgery, age at surgery, weight at surgery, timing of surgery, operative time, and occurrence of incarceration, postoperative apnea, hernia recurrence, testicular atrophy, and hospital stay were compared between the two groups. Statistical analysis was performed using one-way ANOVA.
Results: Twelve preoperative episodes of incarceration occurred: three in the SWG and nine in the LWG (P<0.05). Six infants had apnea postoperatively: four in the SWG and two in the LWG (P>0.05). Follow-up revealed five hernia recurrences, one in the SWG and four in the LWG (P<0.05); four testicular atrophies were found, one in the SWG and three in the LWG (P>0.05).
Conclusion: Early elective herniotomy should be considered in prematures in order to avoid perioperative morbidity and to reduce the risk of incarceration and subsequent testicular ischemia, and hernia recurrence.

هدف البحث: تحديد الوقت الأمثل لإجراء عملية إصلاح الفتق الإربي عند المواليد الخدج المعالجين في وحدة العناية المشددة لحديثي الولادة.
طرق البحث: تم إجراء دراسة راجعة في مركزين شملت 41 من الخدج بأعمار حملية 28–35 أسبوعاً خضعوا لإجراء استئصال للفتق خلال أسبوع واحد من التشخيص (مجموعة الانتظار القصير الأمد SWG بوسيط 5 أيام، وعددهم 25 مريضاً)، أو بعد أكثر من أسبوع من التشخيص (مجموعة الانتظار طويل الأمد LWG بوسيط 30.55 يوماً، وعددهم 16 مريضاً). تمت مقارنة المشعرات التالية بين المجموعتين: العمر الحملي، وزن الولادة، العمر بعد الإخصاب عند وضع التشخيص، العمر عند التشخيص، العمر بعد الإخصاب عند إجراء الجراحة، العمر عند إجراء الجراحة، الوزن عند إجراء الجراحة، وقت إجراء الجراحة، مدة الجراحة، وجود انحباس في الفتق، حدوث توقف تنفس بعد العملية، نكس الفتق، ضمور الخصية، ومدة البقاء بالمشفى. تم إجراء التحليل الإحصائي من خلال اختبار ANOVA.
النتائج: حدثت 12 نوبة انحباس للفتق قبل الجراحة: 3 منها في مجموعة الانتظار قصير الأمد و9 في مجموعة الانتظار طويل الأمد (p<0.05). تطورت حالة توقف تنفس عند 6 من الرضع بعد الجراحة، 4 في مجموعة الانتظار قصير الأمد و2 في مجموعة الانتظار طويل الأمد (p<0.05). أظهرت فترة المتابعة نكس الفتق عند 5 مرضى، واحد في مجموعة الانتظار قصير الأمد و4 في مجموعة الانتظار طويل الأمد (p<0.05)، فيما تطورت 4 حالات ضمور خصية، واحدة في مجموعة الانتظار قصير الأمد و3 في مجموعة الانتظار طويل الأمد (p<0.05).
الاستنتاجات: يجب التفكير بالإجراء الباكر لعملية إصلاح الفتق عند المواليد الخدج وذلك لتجنب المراضة الملاحظة حول الجراحة والحد من خطر انحباس الفتق وما يتبعه من نقص في تروية الخصية، بالإضافة إلى التقليل من حالات نكس الفتق.

Increased Osteopontin-Positive Macrophage Expression in Colorectal Cancer Stroma with Synchronous Liver Metastasis

زيادة التعبير في البالعات إيجابية OPN في لحمة الورم في حالات سرطان الكولون والمستقيم المترافقة مع نقائل كبدية

Imano M, et al.
Wiorld J Surg 2010 Apr 23.

Background: The macrophages that infiltrate the tumor stroma are termed tumor-associated macrophages (TAMs). TAMs contribute to hematogenous spread of cancer cells especially liver metastasis. Osteopontin (OPN) is also related to tumor metastasis and proliferation of tumors. Osteopontin is mainly expressed in macrophages of stroma other than that of tumor cells. The aim of the present study was to investigate differences in OPN-positive TAMs between cases of colorectal cancer with synchronous liver metastasis and those without liver metastasis.
Methods: A total of 54 subjects who had undergone resection of a primary tumor of advanced colorectal cancer were classified into two groups: synchronous colorectal liver metastasis group (s-CLM group; n=30) and no liver metastasis group (controls; n=24). The number of OPN- and CD68-positive cells and the microvascular density (MVD) were determined using the CD105 antibody in the stroma of the invasive margin of the tumor and in the stroma of the central area.
Results: There was no difference in the patient profiles between the two groups. OPN and MVD expression in the central area were significantly higher in the s-CLM group (OPN: control 4.3±1.42, s-CML 12.1±1.42, P<0.05; MVD: control 18.5±2.86, s-CML 27.5±2.94, P<0.05), whereas CD68 expression in the invasive margin was significantly higher in the control group (control 98.9±7.31, s-CML 29.0±4.44, P<0.05).
Conclusions: These data suggest that OPN in the central area may have induced high microvascular density, which led to liver metastasis. Thus, OPN might be a potential target for novel antiangiogenesis therapy for treating colorectal cancer.

خلفية البحث: تدعى البالعات الكبيرة التي ترتشح ضمن لحمة الورم بالبالعات المرافقة للورم TAM. تساهم هذه البالعات في الانتشار الدموي للخلايا الورمية وخاصة النقائل الورمية للكبد. يرتبط مركب Osteopontin (OPN) أيضاً بالانتقالات الورمية وعملية الانقسام في خلايا الورم. يتم التعبير عن Osteopontin في البالعات الكبيرة الموجودة في لحمة الورم بشكل أساسي وذلك بشكل يفوق التعبير عنه في خلايا الورم نفسه. تهدف هذه الدراسة إلى استقصاء الاختلافات الملاحظة في الخلايا البالعة المرافقة للورم إيجابية OPN في حالات سرطان الكولون والمستقيم المترافقة مع نقائل كبدية والحالات الأخرى غير المترافقة مع نقائل كبدية.
طرق البحث: شمل البحث 54 مريضاً من مرضى سرطان الكولون والمستقيم تم استئصال الورم البدئي لديهم جراحياً، تم بعدها تصنيف الحالات إلى مجموعتين: الأولى مجموعة وجود نقائل كبدية مرافقة (30 مريضاً)، والثانية مجموعة عدم وجود نقائل كبدية (مجموعة الشاهد، 24 مريضاً). تم تحديد عدد الخلايا إيجابية OPN والخلايا إيجابية CD68 وكثافة الأوعية الدقيقة MVD من خلال الأضداد CD105 وذلك في لحمة الحواف الغازية للورم ولحمة المنطقة المركزية من الورم.
النتائج: لم يلاحظ وجود فروقات في المعطيات المتعلقة بالمرضى بين المجموعتين. لوحظ أن التعبير عن OPN وMVD كان أعلى وبشكل هام في المنطقة المركزية للورم في مجموعة النقائل الكبدية المرافقة للورم البدئي (OPN: مجموعة الشاهد 4.3±1.42، مجموعة النقائل:12.1±1.42 p<0.05) و(MVD: مجموعة الشاهد 18.5±2.86، مجموعة النقائل 27.5±2.94، p<0.05). أما التعبير عن CD68 في الحواف الغازية للورم فقد كان أعلى وبشكل هام لدى مجموعة الشاهد بالمقارنة مع مجموعة النقائل الورمية الكبدية (مجموعة الشاهد 98.9±7.31، مجموعة النقائل 29.0±4.44، p<0.05)
الاستنتاجات: تقترح هذا الموجودات أن OPN في المنطقة المركزية للورم قد يحرض تطور كثافة عالية من الأوعية الدقيقة ضمن الورم وهو ما يقود بالنتيجة إلى حدوث النقائل الكبدية. ولهذا فإن OPN قد يمثل هدفاً مستقبلياً محتملاً للمعالجات الحديثة المضادة لتشكل الأوعية لحالات سرطان الكولون والمستقيم.

Splenic Artery Embolisation for Portal Hypertension in Children

إصمام الشريان الطحالي لمعالجة فرط التوتر البابي لدى الأطفال

Meisheri IV, et al.
Afr J Paediatr Surg 2010 May-Aug;7(2):86-91.

Background: Bleeding from esophageal varices is one of the most common causes of serious gastrointestinal haemorrhage in children. We analysed our experience with the use of splenic artery embolisation and variceal sclerotherapy for bleeding oesophageal varices.
Patients and Methods: Records of all patients treated for bleeding oesophageal varices caused by portal hypertension from 1998 to 2004 were retrospectively analysed. Patients were followed up for five years.
Results: Out of 25 patients treated, ten belonged to sclerotherapy (group A), eight to combined sclerotherapy and embolisation (group B), and seven to only embolisation (group C). The patients were selected randomly, only two patients who had active bleed recently were directly sclerosed. The splenic artery was embolised at the hilum using steel coils in 15 patients with portal hypertension and hypersplenism. Follow-up findings showed decrease in splenic mass, varices, and hyperdynamic flow.
Conclusion: In spite of few patients and a short period of follow-up, our results pointed out that a serious consideration should be given to this procedure, as it slowed the sequel of portal hypertension and the complications associated with it. Patients who were embolised and followed up for five years had lesser rebleeds and complications than sclerotherapy patients.

خلفية البحث: تعتبر نزوف دوالي المري أحد أشيع أسباب نزوف السبيل المعدي المعوي الخطرة لدى الأطفال. سيتم في هذا البحث عرض الخبرة الشخصية في تطبيق إصمام الشريان الطحالي (إطلاق صمات عبر الشريان) وتصليب دوالي المري في معالجة نزوف دوالي المري.
مرضى وطرق البحث: تم إجراء تحليل راجع شمل بيانات جميع المرضى المعالجين لحالة نزف في دوالي المري ناتج عن فرط توتر الوريد الباب خلال الفترة الممتدة بين عامي 1998 و2004. تمت متابعة المرضى لمدة 5 سنوات.
النتائج: من بين 25 مريضاً تمت معالجتهم خلال هذه المدة، فقد اعتمد تصليب الدوالي عند 10 مرضى (المجموعة A)، وخضع 8 مرضى إلى معالجة مشاركة بين التصليب والإصمام (المجموعة B)، بينما خضع 7 مرضى لمعالجة بالإصمام فقط (المجموعة C). تم اختيار المرضى عشوائياً ولوحظ حدوث نزف فعال عند 2 منهم فقط في الفترة السابقة جرت معالجته من خلال التصليب. جرى إصمام الشريان الطحالي عند السرة الطحالية (النقير hilum) باستخدام ملف فولاذي عند 15 مريضاً من مرضى فرط التوتر البابي وفرط الطحالية. أظهرت موجودات فترة المتابعة تناقص في كل من كتلة الطحال، الدوالي والجريان مفرط النشاط.
الاستنتاجات: على الرغم من قلة عدد المرضى وقصر فترة المتابعة في هذه الدراسة، إلا أن هذه النتائج تشير إلى ضرورة أخذ هذه الطريقة بعين الاعتبار، حيث أنها تبطئ من تطور نواتج ارتفاع التوتر البابي والاختلاطات المرافقة له. لوحظ أن المرضى الذين خضعوا للمعالجة بالإصمام وتمت متابعتهم لمدة 5 سنوات لديهم حوادث أقل لعودة النزف والاختلاطات الأخرى بالمقارنة مع المعالجة بالتصليب.

Right Internal Jugular Vein is Recommended for Central Venous Catheterization

أفضلية الوريد الوداجي الباطن الأيمن في وضع القثطرة الوريدية المركزية

Ishizuka M, et al.
J Invest Surg 2010 Apr;23(2):110-4.

Background: The internal jugular vein (IJV) is one of the recommended sites for safe insertion of a central venous catheter (CVC). Although CVC insertion via the IJV has a lower risk of severe complications such as pneumothorax and arterial bleeding than insertion via the subclavian vein, few reports have provided concrete evidence for the safety of a right-sided approach.

Purpose: To examine whether a right-sided approach, rather than a left-sided one is superior for CVC insertion via the IJV.
Methods: A retrospective study was performed to compare the right IJV with the left in terms of characteristics such as vertical and horizontal diameters, depth from the skin, and the relationship between the IJV and the common carotid artery (CCA) using the same computed tomography axial slice.
Results: From April 2006 to September 2008, 100 patients (50 male and 50 female) who underwent CVC insertion via the IJV before surgery for colorectal cancer were enrolled. Vertical and horizontal diameters of the right IJV were significantly larger than those of the left IJV [right: left (cm), 1.51 +/- 0.41 vs 1.13 +/- 0.34, p<0.0001, 1.54 +/- 0.36 vs 1.08 +/- 0.33, p<0.0001], respectively. The right IJV runs more superficially than the left IJV [right: left (cm), 1.74 +/- 0.60 vs 1.87 +/- 0.56, p<0.0001].
Conclusions: Because the right IJV has a much wider diameter and runs more superficially than the left IJV, a right-sided approach is more acceptable than a left-sided one for CVC insertion via the IJV.

خلفية البحث: يعتبر الوريد الوداجي الباطن IJV أحد الأماكن المفضلة والآمنة لوضع القثطرة الوريدية المركزية CVC. وعلى الرغم من كون مخاطر تطور بعض الاختلاطات الخطرة مثل الريح الصدرية والنزف الشرياني تعتبر أقل عند إدخال القثطرة في الوريد الوداجي الباطن بالمقارنة مع إدخالها في الوريد تحت الترقوة، إلا أن التقارير التي أوردت دلائل موثوقة على سلامة استخدام الوريد الوداجي الباطن الأيمن لهذه المقاربة ما تزال قليلة.
هدف البحث: اختبار أفضلية اعتماد الجانب الأيمن على الأيسر في وضع القثطرة الوريدية المركزية CVC في الوريد الوداجي الباطن.
طرق البحث: تم إجراء دراسة راجعة للمقارنة بين الوريدين الوداجيين الباطنيين الأيمن والأيسر من حيث بعض الخصائص مثل الأقطار الأفقية والعمودية، عمق الشريان عن الجلد والعلاقة بين الوريد الوداجي الباطن والشريان السباتي المشترك CCA، وذلك من خلال استخدام الشرائح المحورية المتوافقة لصور التصوير المقطعي المحوسب.
النتائج: تم خلال الفترة من نيسان 2006 وحتى أيلول 2008 دراسة حالة 100 مريض (50 ذكور و 50 إناث) خضعوا لوضع قثطرة وريدية مركزية CVC في الوريد الوداجي الباطن قبل جراحة لمعالجة سرطان كولوني مستقيمي. لوحظ أن الأقطار العمودية والأفقية للوريد الوداجي الباطن الأيمن كانت أكبر وبشكل هام بالمقارنة مع الوريد الوداجي الباطن الأيسر [القطر العمودي: 1.51±0.41 سم للأيمن مقابل 1.13±0.34 سم للأيسر، p<0.0001، القطر الأفقي: 1.54±0.36 للأيمن مقابل 1.08±0.33 للأيسر، p<0.0001]. لوحظ أيضاً مرور الوريد الوداجي الباطن الأيمن بشكل أكثر سطحية بالمقارنة مع الوريد الوداجي الباطن الأيسر (1.74±0.60 سم للأيمن مقابل 1.87±0.56 للأيسر، p<0.0001).
الاستنتاجات: نتيجة كون الوريد الوداجي الباطن الأيمن أكبر قطراً، وأكثر سطحية في توضعه نسبةً للجلد بالمقارنة مع الوريد الوداجي الباطن الأيسر، فإن المقاربة بالجهة اليمنى لوضع القثطرة الوريدية المركزية CVC في الوريد الوداجي الباطن هي الأكثر قبولاً.

Complications in Patients Undergoing Pulmonary Oncological Surgery

الاختلاطات الملاحظة عند المرضى الخاضعين لجراحة ورمية على الرئة

Sobotka M, et al.
Rozhl Chir 2010 Feb;89(2):113-7.

Aim: A survey evaluating incidence and risk factors of complications in persons underwent complete open lung resection because of primary or secondary lung malignancy.
Material and Methods: Retrospective study of 189 open surgery procedures in 128 males and 61 females, mean age males 61 years (range 21-78), females 64 years (range 33-80) during a five-years period (2003-2007). Data processing and analysis were performed with the statistical software system Statistica and compared by parameters odds ratio a chi2 test.
Results: Complications were divided into five groups. First group was defined as complications in perioperative period and was composed of three events 1.5%: endotracheal tube dysfunction (i.e. 0.5%), heavy cardiac arrhythmia 0.5% and serious haemorrhage that occurred immediately after operation 0.5%. Second group includes complications

within period of 7 days after surgery: prolonged air leak (PAL>7 days) 7.4%, bronchopneumonia 6.9%, cardiac arrhythmia 6.9%, postoperative delirium 4.2%, atelectasis 2.6%, wound infection 1.1%, bleeding 1.1% and chylothorax 0.5%. Third group contains events between 8th and 30th postoperative days: thoracic empyema 2.1%, dysphonia 2.1%, painful shoulder 1.1%, alimentary tract infection 0.5% and bronchial closure insufficiency 0.5%. Fourth group contains patients with severe complications that led to death during 30 days after operation: ischemic stroke 0.5% and pulmonary embolism 0.5%. Patients without any complication formed the fifth group of 60.5%.
Conclusion: Main risk factors for complications in postoperative period after lung resection due to primary or secondary lung malignancy in our group of patients are COPD, corticotherapy, time of operation over 3 hours, BMI over 25, left side tumor localization and bronchoplastic procedure.

هدف البحث: دراسة مسحية لتقييم حدوث الاختلاطات وعوامل الخطورة المرافقة لها عند المرضى الخاضعين لاستئصال رئة كلي بالطريق المفتوح نتيجة خباثة رئوية بدئية أو ثانوية.
مواد وطرق البحث: تم إجراء دراسة راجعة شملت 189 حالة جراحة مفتوحة أجريت لـ 128 من الذكور (متوسط أعمارهم 61 سنة بمجال من 21–78 سنة) و 61 من الإناث (متوسط أعمارهن 64 سنة بمجال 33–80 سنة)، وذلك خلال مدة 5 سنوات (2003 وحتى 2007). تمت تهيئة المعطيات وتحليلها من خلال البرنامج الإحصائي Statistica مع إجراء مقارنة من خلال نسب الأرجحية واختبار كاي مربع (chi 2).
النتائج: تم تقسيم الاختلاطات إلى 5 فئات. عرفت الفئة الأولى بكونها الاختلاطات في الفترة حول الجراحة (1.5%) وتضمنت ثلاثة بنود: سوء في وظيفة أنبوب التنبيب الرغامي (0.5%)، لانظميات قلبية شديدة الوطأة (0.5%)، والنزف الخطر الحادث بشكل مباشر بعد الجراحة (0.5%). أما المجموعة الثانية فقد تضمنت الاختلاطات خلال فترة أسبوع من الجراحة وتضمنت تسرب الهواء طويل الأمد (>7 أيام) (7.4%)، ذات رئة وقصبات (6.9%)، لانظميات قلبية (6.9%)، الهذيان بعد الجراحة (4.2%)، الانخماص الرئوي (2.6%)، إنتان الجرح (1.1%)، النزف (1.1%) وانصباب الصدر الكيلوسي (0.5%). أما المجموعة الثالثة فقد شملت الحوادث الطارئة خلال اليوم 8 وحتى 30 بعد الجراحة وتضمنت: تقيح الجنب (2.1%)، خلل التصويت (2.1%)، الألم في الكتف (1.1%)، الإنتانات في السبيل الهضمي (0.5%) وعدم كفاءة الانغلاق القصبي (0.5%). شملت المجموعة الرابعة مرضى الاختلاطات الشديدة التي أدت للوفاة خلال 30 يوماً من إجراء العملية وتضمنت السكتة بنقص التروية (0.5%) والصمة الرئوية (0.5%)، فيما شكل المرضى الذين لم تتطور لديهم أية اختلاطات المجموعة الخامسة (60.5%).
الاستنتاجات: تضمنت عوامل الخطورة الأساسية لحدوث اختلاطات في الفترة بعد جراحة استئصال الرئة لخباثات بدئية أو ثانوية عند المجموعة المشمولة بهذه الدراسة ما يلي: الداء الرئوي الساد المزمن COPD، المعالجة بالستيروئيدات القشرية، مدة الجراحة التي تفوق 3 ساعات، مشعر كتلة الجسم BMI>25، توضع الورم في الجانب الأيسر وإجراءات تصنيع القصبات.

Proposed Preoperative Risk Score for Patients Candidate to Cardiac Valve Surgery

التحديد قبل الجراحة لمجموع نقاط الخطورة لدى المرضى المرشحين لإجراء جراحة قلبية صمامية

Guaragna JC, et al.
Arq Bras Cardiol 2010 Apr 23.

Background: To establish a risk score for heart surgery allows the assessment of preoperative risk, informing the patient and defining care during the intervention.
Objective: To assess preoperative risk factors for death in cardiac valve surgery and construct a simple risk model (score) for in-hospital mortality of patients candidate to surgery at Hospital Sl£o Lucas of Pontifícia Universidade Catllica do Rio Grande do Sul (HSL-PUCRS).
Methods: The study sample included 1.086 adult patients that underwent cardiac valve surgery between January 1996 and December 2007 at HSL-PUCRS. Logistic regression was used to identify risk and in-hospital mortality factors. The model was developed in 699 patients and its performance was tested in the remaining data (n=387). The

final model was created using the total study sample (n=1.086).
Results: Global mortality was 11.8%: 8.8% of elective cases and 63.8% of emergency cases. At the multivariate analysis, 9 variables remained independent predictors for the outcome: advanced age, surgical priority, female sex, ejection fraction<45%, concomitant myocardial revascularization (CABG), pulmonary hypertension, NYHA functional class III or IV, creatinine levels (1.5 to 2.49 mg/dl and >2.5 mg/dl or undergoing dialysis). The area under the ROC curve was 0.83 (95% CI: 0.78-0.86). The risk model showed good capacity for observed/predicted mortality: the Hosmer-Lemeshow test was x(2)=5.61; p=0.691 and r=0.98 (Pearson's coefficient).
Conclusion: The variables predictive of in-hospital mortality allowed the construction of a simplified risk score for daily practice, which classifies the patient as having low, moderate, high, very high and extremely high preoperative risk.

خلفية البحث: إنشاء منظومة نقاط الخطورة للجراحة القلبية تسمح بتقييم الخطورة قبل العمل الجراحي، وإعطاء المريض فكرة واضحة عن الخطورة الموجودة والعناية اللازمة خلال التداخل.
هدف البحث: تقييم عوامل الخطورة قبل الجراحة للوفيات في جراحات القلب الصمامية وإنشاء نموذج خطورة مبسط للوفيات داخل المشفى عند المرضى المرشحين لإجراء جراحة قلبية صمامية في مشفى (HSL-PUCRS) .
طرق البحث: شملت عينة البحث 1086 من البالغين الذين خضعوا لجراحة قلبية صمامية في الفترة من كانون الثاني 1996 وحتى كانون الأول 2007 في مشفى HSL-PUCRS. تم استخدام التقهقر المنطقي لتحديد عوامل الخطورة والعوامل المرافقة للوفيات داخل المشفى. تم تطوير نموذج عند 699 مريضاً وتم تقييم أداء هذا النموذج عند بقية المرضى (387 مريضاً). تم إنشاء نموذج نهائي بالاعتماد على كامل عينة البحث (1086 مريضاً).
النتائج: بلغت الوفيات الإجمالية 11.8%، 8.8% من الحالات الإنتخابية و63.3% من الحالات الإسعافية. لوحظ من خلال التحليل متعدد المتغيرات وجود 9 متغيرات كعوامل تنبؤية مستقلة للنتائج الملاحظة: تقدم العمر، أولوية الجراحة، الجنس الأنثوي، قيمة الكسر القذفي EF<45%، وجود إعادة توعية قلبية مرافقة CABG، وجود ارتفاع توتر رئوي، النمط III أو IV حسب تصنيف NYHA، مستويات الكرياتينين (1.5–2.49 ملغ/دل أو >2.5 ملغ/دل، أو خضوع المريض لتحال الدموي). بلغت المنطقة تحت منحني ROC 0.83 (بفواصل ثقة 95%، 0.78–0.86). أظهر نموذج الخطورة قدرة جيدة للوفيات الملاحظة والتنبؤية: اختبار Hosmer-Lemeshow x2=5.61، p=0.691، قيمة r=0.98 (معامل Pearson's).
الاستنتاجات: تسمح المتغيرات التنبؤية للوفيات داخل المشفى بإنشاء نموذج مبسط للخطورة للاستخدام اليومي يساعد على تصنيف المرضى إلى مجموعات: منخفضة الخطورة، متوسطة الخطورة، عالية الخطورة، ومجموعة عالية لخطورة جداً، ومجموعة عالية الخطورة إلى أبعد حد.

Pulmonary Disaeses

الإمراض الصدرية

Human Rhinovirus Proteinase 2A Induces T(H)1 and T(H)2 Immunity in Patients With Chronic Obstructive Pulmonary Disease

أنزيمات بروتيناز الفيروسات الأنفية البشرية 2A تحرض استجابة مناعية في الخلايا T(H)1 و T(H)2 عند مرضى الداء الرئوي الساد المزمن

Singh M, et al.
J Allergy Clin Immunol 2010 Apr 27.

Background: Tobacco-related lung diseases, including chronic obstructive pulmonary disease (COPD), are major causes of lung-related disability and death worldwide. Acute exacerbation of COPD (AE-COPD) is commonly

associated with upper and lower respiratory tract viral infections and can result in respiratory failure in those with advanced lung disease.

Objective: We sought to determine the mechanism underlying COPD exacerbation and host response to pathogen-derived factors.

Methods: Over a 24-month period, we assessed the viral causes for upper and lower respiratory tract infections in patients with COPD (n=155) and control subjects (n=103). We collected nasal and bronchoalveolar lavage fluid and peripheral blood under baseline and exacerbated conditions. We determined the effect of human rhinovirus (HRV) proteinases on T-cell activation in human subjects and mice.

Results: HRVs are isolated from nasal and lung fluid from subjects with AE-COPD. Bronchoalveolar lavage fluid and CD4 T cells from patients with COPD exhibited a T(H)1 and T(H)2 cell cytokine phenotype during acute infection. HRV-encoded proteinase 2A activated monocyte-derived dendritic cells in vitro and induced strong T(H)1 and T(H)2 immune responses from CD4 T cells. Intranasal administration of recombinant rhinovirus proteinase 2A in mice resulted in an increase in airway hyperreactivity, lung inflammation, and IL-4 and IFN-gamma production from CD4 T cells.

Conclusion: Our findings suggest that patients with severe COPD show T(H)1- and T(H)2-biased responses during AE-COPD. HRV-encoded proteinase 2A, like other microbial proteinases, could provide a T(H)1- and T(H)2-biasing adjuvant factor during upper and lower respiratory tract infection in patients with severe COPD. Alteration of the immune response to secreted viral proteinases might contribute to worsening of dyspnea and respiratory failure in patients with COPD.

خلفية البحث: تعتبر أمراض الرئة المتعلقة بالتبغ ومن ضمنها الداء الرئوي الساد المزمن COPD من الأسباب الهامة لحالات العجز والوفاة المتعلقة بالرئة. يعتبر ترافق النوب الحادة لتفاقم الداء الرئوي الساد المزمن مع الإنتانات الفيروسية في السبيل التنفسي العلوي أو السفلي من الأمور الشائعة التي قد تؤدي إلى تطور قصور تنفسي في حالات الأمراض الرئوية المتقدمة.

هدف البحث: يهدف هذا البحث إلى تحديد الآلية الكامنة وراء تفاقم الداء الرئوي الساد المزمن واستجابة الثوي للعوامل المشتقة من العناصر الممرضة.

طرق البحث: تم خلال فترة 24 شهراً تقييم الأسباب الفيروسية للإنتانات في السبيل التنفسي العلوي والسفلي عند 155 من مرضى الداء الرئوي الساد المزمن COPD وعند 103 من الأصحاء كحالات شاهد. تم جمع المفرزات الأنفية وسائل غسالة القصبات والأسناخ، كما تم خذ عينة من الدم المحيطي وذلك في الحالة القاعدية وخلال حالة تفاقم الداء. تم تحديد تأثير أنزيمات بروتيناز الفيروسات الأنفية البشرية (human rhinovirus) على تفعيل الخلايا التائية عند كل من الإنسان والفئران.

النتائج: تم عزل الفيروسات الأنفية البشرية من سوائل الأنف والرئة من حالات نوب تفاقم الداء الرئوي الساد المزمن. أظهر سائل غسالة القصبات والأسناخ والخلايا التائية CD4 عند مرضى الداء الرئوي الساد المزمن وجود سيتوكينات الخلايا T(H)1 و T(H)2 خلال الإنتان الحاد. أدى البروتيناز 2A المشفر بواسطة الفيروسات الأنفية البشرية إلى تفعيل الخلايا المتغصنة المشتقة من الوحيدات في الزجاج، كما أنه حرض استجابة مناعية قوية للخلايا T(H)1 و T(H)2 من الخلايا التائية CD4. أدى الإعطاء داخل الأنف لبروتيناز الفيروسات الأنفية البشرية 2A المأشوب عند الفئران إلى زيادة في ارتكاسية الطرق الهوائية، الالتهاب الرئوي وزيادة إنتاج الإنترلوكين-4 والغاما إنترفيرون من الخلايا التائية CD4.

الاستنتاجات: تقترح هذه الموجودات أن مرضى الحالات الشديدة من الداء الرئوي الساد المزمن يظهرون استجابة معتمدة على الخلايا T(H)1 و T(H)2خلال النوب الحادة من تفاقم الداء. يمكن للبروتيناز 2A المشفر بواسطة الفيروسات الأنفية البشرية -كما أنزيمات البروتيناز في العناصر الحيوية الدقيقة الأخرى- أن يوفر عامل مساعد بالخلايا T(H)1 و T(H)2 خلال إنتانات السبيل التنفسي العلوي أو السفلي عند مرضى الحالات الشديدة من الداء الرئوي الساد المزمن. إن تعديل الاستجابة المناعية لأنزيمات البروتيناز الفيروسية المفرزة قد يساهم في تفاقم الزلة التنفسية والقصور التنفسي عند مرضى الداء الرئوي الساد المزمن.

Cardiovascular Diseases

الإمراض القلبية الوعائية

Bone Marrow Dysfunction in Chronic Heart Failure Patients

خلل وظيفة النقي العظمي عند مرضى قصور القلب المزمن

Westenbrink BD, et al.
Eur J Heart Fail 2010 Apr 28.

Aims: To investigate whether chronic heart failure (CHF) is associated with a general dysfunction of the haematopoietic compartment.

Methods And Results: Bone marrow was obtained during coronary artery bypass graft surgery from 20 patients with CHF (age 67 +/- 6 years, 75% NYHA class >/= III, LVEF 32 +/- 6%), and 20 age- and gender-matched control patients with normal cardiac function. CD34(+) haematopoietic progenitor cells were isolated and cultured with increasing doses of erythropoietin (0.02-10 IU/mL, EPO), myeloid growth factors or a mix of both. After 14 days, burst forming units erythroid (BFU-E), and granulocyte or monocyte colony forming units (CFU-G, CFU-M, respectively) were counted. Apoptosis and erythropoietin-receptor (EPO-R) density were quantified by flow cytometry. Throughout the EPO dose range, the CD34(+) cells from CHF patients produced a two-fold lower number of BFU-E colonies compared with controls (P=0.02). The resistance to EPO was associated with markedly increased apoptosis during erythroid differentiation in CHF patients compared with controls [5.3% (2.9-8.1%) vs. 1.5% (0.8-3.4%), P=0.01]. Erythropoietin-receptor expression was, however, comparable between CHF patients and controls and the anti-apoptotic cytokine interleukin-3 did not rescue erythropoiesis. In the myeloid cultures, the number of CFU-G and CFU-M colonies was also two-fold lower in CHF patients compared with controls (both P<0.01). In the mixed-culture assay, myelopoiesis and erythropoiesis were reduced to a similar magnitude in CHF patients. The impaired clonogenic potential was independently associated with clinical and biochemical severity of CHF, but not with the presence of anaemia.

Conclusion: Chronic heart failure is associated with profound and general bone marrow dysfunction, simultaneously affecting multiple haematopoietic lineages.

هدف البحث: استقصاء وجود ترافق بين قصور القلب المزمن CHF مع الخلل العام في المكونات المولدة للدم.

طرق البحث والنتائج: تم الحصول على عينات من النقي العظمي من 20 مريضاً من مرضى قصور القلب المزمن خلال خضوعهم لجراحة وضع مجازة للأوعية الإكليلية (أعمارهم 67±6 سنة، 75% منهم بتصنيف NYHA ≤ III، الكسر القذفي للبطين الأيسر LVEF 32±6%)، كما أخذت عينات من 20 من الأشخاص سويي الوظيفة القلبية الموافقين لمجموعة المرضى من ناحية العمر والجنس شكلوا مجموعة شاهد. تم عزل طلائع الخلايا المكونة للدم (+)CD34 وتم زرعها بوجود جرعات متزايدة من الإريتروبويتين erythropoietin (0.02−10 وحدة دولية/مل)، أو بوجود عوامل النمو النقوية أو بوجودهما معاً. وبعد مرور 14 يوماً تم عد الوحدات المكونة للسلسلة الحمراء BFU-E، الوحدات المكونة لمستعمرات المحببات CFU-G أو الوحيدات CFU-M، كما تم قياس الاستماتة الخلوية apoptosis وكثافة مستقبلات الإريتروبويتين EPO-R من خلال قياس الجريان الخلوي. لوحظ خلال طيف الجرعات المستخدمة من الإريتروبويتين أن الخلايا (+)CD34 المأخوذة من مرضى قصور القلب المزمن أنتجت كمية أقل بضعفين من مستعمرات الخلايا المولدة للسلسلة الحمراء BFU-E بالمقارنة مع مجموعة الشاهد (p=0.02). ترافقت هذه المقاومة لتأثير الإريتروبويتين مع زيادة ملحوظة في الاستماتة الخلوية خلال مرحلة تمايز السلسلة الحمراء عند مرضى قصور القلب المزمن بالمقارنة مع مجموعة الشاهد [5.3% (2.9-8.1%) مقابل 1.5% (0.8-3.4%)، p=0.01]. من جهة أخرى لوحظ أن التعبير عن مستقبلات الإريتروبويتين EPO-R متشابه بين مجموعة مرضى قصور القلب

المزمن ومجموعة الشاهد، كما أن السيتوكين المضاد لعملية الاستماتة الخلوية (وهو الإنترلوكين 3) لم يساهم بإنقاذ الخلايا المولدة للسلسلة الحمراء. أما في الزروع النقوية فقد لوحظ أيضاً أن عدد مستعمرات الوحدات المكونة لمستعمرات المحببات CFU-G والوحيدات CFU-M أقل وبضعفين عند مرضى قصور القلب المزمن بالمقارنة مع مجموع الشاهد (p<0.01 لكل من الحالتين). أما في مقايسة الزروع المختلطة فقد لوحظ أن عملية تكون الخلايا النقوية وعملية تكون الكريات الحمراء قد تراجعت بالدرجة نفسها عند مرضى قصور القلب المزمن. لوحظ ارتباط هذا التراجع في القدرة على توليد النسائل بشكل مستقل مع الشدة السريرية والكيميائية الحيوية لقصور القلب المزمن، دون وجود ارتباط مع وجود فقر دم.

الاستنتاجات: يترافق قصور القلب المزمن مع خلل عام وواضح في وظيفة النقي العظمي يؤثر بشكل متزامن على عدة سلالات من الخلايا المكونة للدم.

Statins and Inflammation: An Update

الستاتينات والالتهاب: المستجدات

Quist-Paulsen P.
Curr Opin Cardiol 2010 Apr 23.

Purpose of Review: Randomized trials have suggested that the beneficial effects of statins could extend to mechanisms beyond cholesterol reduction. Investigations have shown that statins are associated with reduced plasma markers of inflammation, reduced T-cell and monocyte activation, and reduced blood clotting. These effects could be explained by the inhibition of L-mevalonic acid synthesis, thus affecting cell-signalling pathways. However, it has been difficult to evaluate whether the nonlipid effects of statins translate into clinically meaningful outcomes.

Recent Findings: Inflammation, as measured by C-reactive protein (CRP), has been established as an independent cardiovascular risk factor, even in persons with low-density lipoprotein (LDL)-cholesterol. Statins have anti-inflammatory effects, and lower CRP. Reducing both LDL-cholesterol and CRP is important in order to decrease the risk of cardiovascular events. Statins significantly reduce the risk of venous thrombosis. It is probable that this effect goes beyond lipid lowering. The clinical benefit of statin therapy in infectious diseases remains to be determined by randomized controlled trials.

Summary: Statins have anti-inflammatory properties that are clinically important in lowering cardiovascular risk. It is probable, but not definitely proven, that some of the benefits of statins are due to their nonlipid effects.

هدف المراجعة: اقترحت مجموعة من الدراسات العشوائية أن التأثيرات الإيجابية لأدوية الستاتينات statins ربما تتعدى في آليتها التأثير الخافض للكولسترول. أظهرت الاستقصاءات أن الستاتينات تترافق مع تراجع في الواسمات البلازمية للالتهاب، تراجع في تفعيل الخلايا التائية والوحيدات، وتراجع في تخثر الدم. يمكن تفسير هذه التأثيرات بتثبيط اصطناع حمض L-mevalonic وبالتالي التأثير على الطرق التفاعلية المتعلقة بالإشارة الخلوية، ولكن ما يزال من الصعب تقييم مدى تحول هذه التأثيرات غير الشحمية للستاتينات إلى نتائج هامة سريرياً.

الموجودات الحديثة: لقد تم تأكيد دور الالتهاب –المقاس بواسطة البروتين التفاعلي C (CRP)– كعامل خطورة مستقل للأمراض القلبية الوعائية. تمتلك الستاتينات تأثير مضاد للالتهاب حيث تقلل من مستوى CRP. يعتبر تخفيض مستوى كولسترول البروتين الشحمي منخفض الكثافة LDL والبروتين التفاعلي CRP من الأمور الهامة في الحد من خطر الحوادث القلبية الوعائية. تقلل الستاتينات وبشكل هام من خطر الخثارات الوريدية، حيث يعتقد أن هذا التأثير يتعدى الدور الخافض للشحوم لهذه الأدوية. إن الفائدة السريرية للمعالجة بالستاتينات في الأمراض الإنتانية تحتاج للمزيد من الاستقصاء عبر دراسات عشوائية مضبوطة.

الخلاصة: تمتلك الستاتينات خصائص مضادة للالتهاب لها دور هام في الحد من خطر تطور الأمراض القلبية الوعائية، ومن المحتمل –ولكن غير المؤكد بعد– أن بعض الفوائد الإيجابية لهذه الأدوية قد تنتج عن تأثيرات غير شحمية.

Endocrinology, Metabolism, And Diabetes Mellitus

إمراض الغدد الصم والاستقلاب والداء السكري

Rare Causes of Calcitriol-Mediated Hypercalcemia

الأسباب النادرة لفرط كالسيوم الدم المحرض بـ Calcitriol

Kallas M, et al.
J Clin Endocrinol Metab 2010 Apr 28.

Context: Calcitriol-mediated hypercalcemia resulting from elevated extrarenal 25-hydroxyvitamin D-1alpha-hydroxylase (1alpha-hydroxylase) activity has not previously been described in giant cell polymyositis.
Case: We report an unusual case of hypercalcemia due to disseminated granulomatous disease in a 62-yr-old woman with profound proximal muscle weakness and weight loss. She was initially diagnosed with vitamin D deficiency myopathy with a low serum 25-hydroxyvitamin D; serum calcium at this time was low-normal. Vitamin D3 3000 IU daily was prescribed. One month later, blood work showed new hypercalcemia and hypercalciuria with normalized 25-hydroxyvitamin D. 1,25-dihydroxyvitamin D was high-normal, despite a suppressed PTH, undetectable PTHrP, and essentially normal renal function. Her hypercalcemia resolved, and her strength improved only after prednisone was added to bisphosphonate therapy. Two weeks later, she died from acute congestive heart failure.
Methods and Results: Autopsy revealed a disseminated giant cell myositis affecting skeletal, cardiac, and gastrointestinal smooth muscle. Immunohistochemistry localized 1alpha-hydroxylase to the inflammatory infiltrates in skeletal and cardiac muscle.
Evidence: A review of English publications in Medline and Embase, including a reference search of retrieved articles, revealed that calcitriol-mediated hypercalcemia has been described in over 30 conditions, most of which are granulomatous in nature, ranging from inflammatory conditions and foreign body exposures to infections and neoplasms.
Conclusions: Hypercalcemia resulting from autonomous 1alpha-hydroxylase activity may be unmasked by low-dose vitamin D supplementation and should not be excluded from the differential diagnosis of nonparathyroid causes if the serum calcitriol is inappropriately normal, rather than frankly elevated.

محتوى البحث: لم يتم سابقاً إيراد حدوث فرط كالسيوم الدم المحرض بـ Calcitriol الناتج عن ارتفاع فعالية أنزيم 25-hydroxyvitamin 1alpha- D hydroxylase (1alpha-hydroxylase) خارج الكلية في حالات التهاب العضلات العديد ذو الخلايا العرطلة.
الحالة: نورد هنا حالة فريدة من ارتفاع كالسيوم الدم نتيجة داء حبيبومي منتشر عند امرأة عمرها 62 سنة لديها ضعف عضلي داني واضح مع نقص وزن. شخصت حالة المريضة بدايةً على أنها اعتلال عضلي بنقص الفيتامين D حيث لوحظ انخفاض في مستوى 25-hydroxyvitamin D المصلي مع كون مستويات الكالسيوم المصلية على الحد الأدنى للطبيعي في هذه المرحلة. تم وضع المريضة على معالجة باستخدام 3000 وحدة دولية يومياً من الفيتامين D3، ولكن بعد شهر واحد من المعالجة أظهرت فحوصات الدم تطور جديد لفرط كالسيوم الدم مع فرط في كالسيوم البول وعودة مستويات 25-hydroxyvitamin D للمستوى الطبيعي. لوحظ أن مستويات 1.25-dihydroxyvitamin D كانت على الحد الأعلى من الطبيعي وذلك على الرغم من تثبط PTH، ووجود مستويات PTHrP غير قابلة للكشف، والوظيفة الكلوية الطبيعية. لوحظ تراجع في فرط كالسيوم الدم وتحسن في القوة العضلية لدى إضافة prednisone للمعالجة باستخدام bisphosphonate. توفيت المريضة بعد ذلك بأسبوعين نتيجة لقصور قلب احتقاني حاد.
طرق البحث والنتائج: أظهر فتح الجثة التهاب عضلات منتشر بالخلايا العرطلة يصيب العضلات الهيكلية، العضلة القلبية، والعضلات الملساء للسبيل المعدي المعوي. أظهرت الكيمياء النسيجية المناعية توضع 1alpha-hydroxylase في الرشاحة الالتهابية في العضلات الهيكلية وعضلة القلب.

الدلائل: أظهرت مراجعة المنشورات باللغة الانكليزية في Medline و Embase والتي تضمنت البحث عن المقالات المرجعية ذات الصلة أن حالة فرط كالسيوم الدم المحرض بـ calcitriol قد سجلت في أكثر من 30 حالة معظمها حالات حبيبومية الطبيعة، تراوحت بين حالات التهابية وتعرض لجسم أجنبي وحتى إنتانات وتنشؤات.

الاستنتاجات: إن حالات فرط كالسيوم الدم الناتجة عن وجود فعالية مستقلة لأنزيم 1alpha-hydroxylase قد يكشف النقاب عنها بالجرعات الداعمة المنخفضة من الفيتامين D، كما يجب عدم استبعادها من التشخيص التفريقي للأسباب غير الدريقية لفرط الكالسيوم وذلك عندما يكون مستوى calcitriol على الحد الأعلى من الطبيعي أكثر من كونه مرتفع بشكل صريح.

Hematology And Oncology

إمراض الدم والإورام

FGFR4 Arg388 Genotype Is Associated With Pathological Complete Response to Neoadjuvant Chemotherapy for Primary Breast Cancer

ترافق النمط الوراثي FGFR4 Arg388 مع الاستجابة التشريحية المرضية الكاملة للمعالجة الكيمائية المساعدة الحديثة لحالات سرطان الثدي البدئي

Werfi W, et al.
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Background: A single-nucleotide polymorphism (SNP) in the FGFR4 gene is associated with poor prognosis in solid tumors. A recent study presented the first evidence that FGFR4 Arg388 could predict resistance to adjuvant chemotherapy in breast cancer. The present study evaluates the potential of this SNP to predict response to neoadjuvant chemotherapy (NCT) for primary breast cancer (PBC).

Methods: As part of a randomized phase II trial, 257 patients received either doxorubicin-cyclophosphamide (AC) or doxorubicin-pemetrexed (AP) followed by docetaxel (Doc; Taxotere) as NCT for T2-4/N0-2/M0 PBC. FGFR4 genotype analyzed on germline DNA was correlated with clinicopathologic variables, clinical response, and pathological complete response (pCR) using univariate and multivariate analyses.

Results: Only axillary lymph node status was associated with FGFR4 Arg388 [odds ratio (OR) 1.82, P=0.03]. Joint analysis of both treatment arms revealed a correlation of FGFR4 Arg388 with clinical response (OR 2.14, P=0.03) but not with pCR. In the AC-Doc arm, however, FGFR4 Arg388 was a strong predictor of pCR in the multivariate analysis (OR 3.79, P=0.03). A significant interaction between FGFR4 genotype and treatment (P=0.01) was found, indicating a therapy-specific effect.

Conclusion: We provide the evidence that FGFR4 388Arg is an independent predictor of pCR following AC-Doc as NCT in PBC.

خلفية البحث: تترافق التعددية الشكلية وحيدة النكليوتيد SNP في مورثة FGFR4 مع إنذار سيء في حالات الأورام الصلبة. أظهرت دراسة أجريت مؤخراً أولى الدلائل على دور FGFR4 Arg388 في التنبؤ بحدوث مقاومة للمعالجة الكيميائية المساعدة في حالات سرطان الثدي. تهدف هذه الدراسة إلى تقييم الدور المحتمل لهذه التعددية الشكلية SNP في التنبؤ بالاستجابة للمعالجة الكيميائية المتممة في سرطانات الثدي البدئية.

طرق البحث: كجزء من الطور الثاني لدراسة عشوائية، خضعت 257 مريضة لمعالجة باستخدام doxorubicin-cyclophosphamide (AC) أو doxorubicin-pemetrexed (AP) يتبعها docetaxel (Doc; Taxotere) كمعالجة كيميائية مساعدة لسرطان ثدي بدئي بالمرحلة T2-4/ N0-2/M0. تم تحليل النمط الوراثي لمورثة FGFR4 في دنا السلسلة الإنتاشية وربطه بالمتغيرات السريرية التشريحية المرضية، الاستجابة السريرية،

والاستجابة التشريحية المرضية الكاملة وذلك من خلال التحليل وحيد المتغير ومتعدد المتغيرات.

النتائج: لوحظ الارتباط فقط بين حالة العقد اللمفاوية الإبطية و FGFR4 Arg388 (نسبة الأرجحية OR=1.82، p=0.03). أظهر التحليل المترابط لكلتا المقاربتين العلاجيتين وجود علاقة بين FGFR4 Arg388 والاستجابة السريرية (نسبة الأرجحية OR=2.14، p=0.03)، مع انتفاء هذه العلاقة مع الاستجابة التشريحية المرضية الكاملة. ولكن لوحظ لدى مجموعة المعالجة الأولى AC-Doc (doxorubicin-cyclophosphamide) ومن ثم docetaxel) أن FGFR4 Arg388 قد مثلت عاملاً تنبؤياً هاماً للاستجابة التشريحية المرضية الكاملة وذلك من خلال التحليل متعدد المتغيرات (نسبة الأرجحية OR=3.79، p=0.03). لوحظ وجود تفاعلات متبادلة هامة بين النمط الوراثي للمورثة FGFR4 والمعالجة (p=0.01) وهو ما يشير لوجود تأثير متعلق بشكل نوعي بالمعالجة.

الاستنتاجات: يقدم هذا البحث دليلاً على دور FGFR4 388Arg كمشعر تنبؤي مستقل للاستجابة التشريحية المرضية الكاملة خلال المعالجة الكيماوية المساعدة الحديثة AC-Doc في سرطانات الثدي البدئية.

Treatment and Prognosis of Extrapulmonary Small Cell Carcinoma of 243 Cases

المعالجة والإنذار في حالات السرطان صغير الخلايا خارج الرئة EPSCC (دراسة 243 حالة)

Song Y, et al.
Zhonghua Zhong Liu Za Zhi 2010 Feb;32(2):132-8.

Objective: The extrapulmonary small cell carcinoma (EPSCC), a uncommon malignant tumor, has seldom been reported. The aim of this study was to analyze the clinical characteristics, treatment and prognosis of EPSCC.

Methods: The clinical data of 243 patients admitted in our hospital from 1977 to 2007 were reviewed. The survival rate was calculated by the Kaplan-Meier method and log-rank test.

Results: The median age of the patients was 58 years and the male-to-female ratio was 2.47:1. According to VALSG criteria, 209 patients had limited disease (LD) and 34 had extensive disease (ED). 170 patients received chemotherapy-based multimodal therapy, 73 received surgery, and/or radiotherapy. The 6, 12, 24, 36 and 60-month survival rates of these patients were 88.9%, 67.2%, 36.8%, 27.3% and 18.3%, respectively. The clinical stage, vessel involvement and regional lymph node metastases were independent prognostic factors of EPSCC. Patients with LD had a median overall survival of 18.6 months compared with 14.0 months in patients with ED (P=0.030). The median survival was 19.2 months for the patients without vessel involvement and 14.4 months with vessel involvement (P=0.026). The median survival of the patients with regional lymph node metastases was 13.9 months, while 39.5 months without regional lymph node metastases (P=0.000). Among different primary sites, patients with gynecologic small cell cancer had a median survival of 28.0 months, head and neck 20.1 months and gastrointestinal tract 14.3 months. Brain metastasis was observed in a lower number of patients with EPSCC compared with that in patients with SCLC. There were no statistically significant differences in overall survival between patients with pure and mixed EPSCC (P=0.396).

Conclusion: EPSCC is an uncommon malignant tumor with early metastasis and poor prognosis. The clinical characteristics of EPSCC and SCLC were similar in some aspects; however, there are some differences in etiology, clinic course, survival and frequency of brain metastases. These differences may influence the choice of therapeutic strategy. Multimodal therapy, combination of chemo- and radio-therapy after surgical resection may improve the outcome of EPSCC.

هدف البحث: لقد أورد حدوث السرطان صغير الخلايا –وهو ورم خبيث قليل الشيوع– في مواقع خارج رئوية في حالات نادرة جداً. تهدف هذه الدراسة إلى تحليل الخصائص السريرية، طرق المعالجة والإنذار في حالات السرطان صغير الخلايا خارج الرئة EPSCC.

طرق البحث: تمت مراجعة السجلات المتعلقة بـ 243 مريضاً تم قبولهم في مشفى البحث بين عامي 1977-2007. تم حساب معدل البقيا من خلال طريقة Kaplan-Meier واختبار log-rank.

النتائج: بلغ وسيط عمر المرضى 58 سنة، مع نسبة ذكور : إناث بلغت 2.47: 1. تبعاً لمعايير VALSG فقد لوحظ وجود مرض محدود LD عند 209

مرضى، بينما لوحظ مرض منتشر ED لدى 34 مريضاً. خضع 170 مريضاً للمعالجة الكيماوية متعددة النماذج، بينما خضع 73 للجراحة مع أو بدون المعالجة الشعاعية. بلغت معدلات البقيا لمدة 6، 12، 24، 36 و60 شهراً عند مرضى البحث 88.9%، 67.2%، 36.8%، 27.3% و18.3% على الترتيب. لوحظ أن المرحلة السريرية للورم، إصابة الأوعية والنقائل للعقد اللمفاوية الناحية هي عوامل إنذارية مستقلة لحالات السرطان صغير الخلايا خارج الرئة EPSCC. لوحظ لدى مرضى الحالات المحدودة أن وسيط البقيا هو 18.6 شهراً مقارنةً مع 14.0 شهراً لدى الحالات المنتشرة (p=0.030). بلغ وسيط البقيا 19.2 شهراً في حالات عدم وجود إصابة ممتدة للأوعية بالمقارنة مع 14.4 شهراً لدى حالات وجود هذه الإصابة (p=0.026). بلغ وسيط مدة البقيا لدى المرضى مع وجود نقائل للعقد اللمفاوية الناحية 13.9 شهراً بينما بلغ 39.5 شهراً في حالة عدم وجود نقائل للعقد اللمفاوية (p=0.000). أما بالنسبة لموقع الخباثة البدئية فقد لوحظ أن مرضى السرطان صغير الخلايا في الجهاز التناسلي الأنثوي لديهن وسيط بقيا 28.0 شهراً، أما في حال توضعه في منطقة الرأس والعنق فإن وسيط البقيا 20.1 شهراً، وفي السبيل المعدي المعوي 14.3 شهراً. لوحظت النقائل الدماغية عند عدد أقل من مرضى السرطان صغير الخلايا خارج الرئة EPSCC بالمقارنة مع مرضى سرطان الرئة صغير الخلايا SCLC. لم يلاحظ وجود فارق هام من الناحية الإحصائية في البقيا الإجمالية بين النمط النقي والمختلط للسرطان صغير الخلايا خارج الرئة EPSCC.

الاستنتاجات: يعتبر السرطان صغير الخلايا خارج الرئة EPSCC أحد الأورام الخبيثة قليلة الشيوع التي تتميز بحدوث نقائل باكرة وإنذار سيء. لوحظ وجود تشابه في بعض المظاهر السريرية للسرطان صغير الخلايا خارج الرئة EPSCC وسرطان الرئة صغير الخلايا SCLC، إلا أنه توجد اختلافات في السببيات، السير السريري، البقيا وتواتر حدوث النقائل الدماغية. يمكن لهذه الاختلافات أن تؤثر على الخيارات العلاجية الواجب اتباعها. يمكن للمعالجة متعددة النماذج، المشاركة بين المعالجة الكيماوية والشعاعية بعد الاستئصال الجراحي أن تحسن من النتائج الملاحظة في حالات السرطان صغير الخلايا خارج الرئة EPSCC.

Gastroenterology

الإمراض الهضمية

Food Allergy and Eosinophilic Gastroenteritis and Colitis

الأرجية الغذائية والتهاب المعدة والأمعاء الإيوزيني والتهاب الكولون الإيوزيني

Bischoff SC.
Curr Opin Allergy Clin Immunol 2010 Jun;10(3):238-45.

Purpose Of Review: Eosinophilic gastroenteritis (EGE) and eosinophilic colitis (ECO) are two forms of chronic inflammatory disorders of the gastrointestinal tract characterized by eosinophil accumulation in the mucosa or in deeper layers of the gastrointestinal wall and associated with atopic disease. The eosinophilic gastrointestinal diseases broadened the spectrum of atopic gastrointestinal disorders formerly restricted to food allergy manifestating at the gastrointestinal mucosa. Their awareness increased enormously; therefore, we will review current knowledge about atopic gastrointestinal diseases for the allergologist.

Recent Findings: Major attention will be drawn to the differential diagnosis, because symptoms of atopic gastrointestinal diseases frequently mimic those of other chronic inflammatory bowel diseases (IBDs) or irritable bowel syndrome (IBS), although the diseases are distinct in their histopathology, gene expression signature, response to therapy, and association with allergies. The pathogenesis of EGE and ECO will be described that involves environmental and genetic factors, particularly food antigens and expression level of interleukin (IL)-5 and selective chemokines.

Summary: Understanding symptoms and pathology of such disease is the basis of a rational treatment based on reduced exposure to offending food antigens as well as anti-inflammatory therapy. Atopic gastrointestinal diseases are in many cases reversible; however, chronic treatment is often necessary to prevent relapse.

هدف المراجعة: يعتبر التهاب المعدة والأمعاء الإيوزيني EGE والتهاب الكولون الإيوزيني ECO شكلان من الاضطرابات الالتهابية المزمنة في السبيل المعدي المعوي يتميزان بتراكم الخلايا الإيوزينية (الحمضات eosinophils) في المخاطية أو في الطبقات الأعمق من الجدر المعدية المعوية، مع ترافقها مع أمراض تأتبية أخرى. لقد وسع الداء الإيوزيني في السبيل المعدي المعوي مفهوم الاضطرابات المعدية المعوية التأتبية والتي اقتصرت سابقاً على الأرجية الغذائية التي تتظاهر في المخاطية المعدية المعوية. ولهذا فإن معرفة هذه الأمراض قد ازدادت بشكل كبير، وبالتالي نقوم هنا بمراجعة المعلومات الحالية حول الأمراض التأتبية في السبيل المعدي المعوي.

الموجودات الحديثة: يتوجه الانتباه نحو التشخيص التفريقي بشكلٍ أساسي، ذلك أن أعراض الأمراض المعدية المعوية التأتبية تحاكي في كثيرٍ من الحالات أعراض الأمراض المعوية الالتهابية المزمنة الأخرى IBDs، أو متلازمة الكولون المتهيج IBS، وذلك على الرغم من وجود صفات مميزة للأمراض التأتبية من الناحية النسيجية المرضية، التعبير المورثي، والاستجابة للعلاج وترافقها مع الأرجية. تتضمن إمراضية التهاب المعدة والأمعاء الإيوزيني EGE والتهاب الكولون الإيوزيني ECO تدخل عوامل بيئية ومورثية (جينية) وخاصةً المستضدات الغذائية ومستوى التعبير عن الإنترلوكين-5 (IL-5) وبعض الكيموكينات الانتقائية.

الخلاصة: يعتبر الفهم الجيد لأعراض ومرضيات هذه الأمراض حجر الأساس في المعالجة المناسبة والتي تعتمد على تقليل التعرض للمستضدات الغذائية المتهمة بالإضافة للمعالجة المضادة للالتهاب. يكون الداء التأتبي في المعدة والأمعاء قابلاً للتراجع في كثيرٍ من الحالات، إلا أن المعالجة المزمنة غالباً ما تكون ضرورية لمنع النكس.

Urology And Nephrology

إمراض الكلية والجهاز البولي

Robot-Assisted Adrenal-Sparing Surgery for Pheochromocytoma

الجراحة المحافظة على الكظر بمساعدة الإنسان الآلي في حالات ورم القواتم

Gupta NP, et al.
J Endourol 2010 May 22.

Purpose: To assess the feasibility, describe the technique, and report our experience with use of the da Vinci S robotic surgical system in the management of pheochromocytoma.

Patients and Methods: For four patients with metabolically active adrenal pheochromocytoma (two right, two left), standard preoperative preparation was performed. A robotic transperitoneal approach was used for all cases. Sparing of the adjacent normal parenchyma was performed in all cases. All relevant perioperative details were collected and analyzed.

Results: Mean operative time was 77.5 minutes (range 40-140 min), and blood loss was 97.5 mL (range 50-160 mL). There were no conversions or perioperative complications. Average tumor size was 4.7 cm. There were three episodes of intraoperative hypertension necessitating therapeutic intervention. Average analgesic requirement was 150 mg of diclofenac, and patients were allowed oral intake after 6 hours. The drain was removed within 24 hours, with average hospital stay of 4 days. The histopathology report confirmed pheochromocytoma in all patients with free surgical resection margins. Average follow-up was 9 months (range 4-14 mos) with no evidence of recurrence or extra-adrenal tumor.

Conclusion: Robot-assisted excision of pheochromocytoma is feasible, safe, and efficacious in our early experience. Sparing of the normal adjacent adrenal parenchyma is possible with little detrimental effect on the oncologic efficacy of the surgery. Long-term studies are needed to further confirm this issue.

هدف البحث: تقييم جدوى استخدام النظام الجراحي المعتد على الإنسان الآلي (نظام da Vinci S) في تدبير حالات ورم القواتم pheochromocytoma، ووصف التقنية المطبقة وإيراد الخبرة الشخصية حول هذا الموضوع.
مرضى وطرق البحث: تم إجراء التحضير قبل الجراحي اللازم لأربع حالات من ورم القواتم الكظري الفعال استقلابياً (حالتين في الجهة اليمنى وحالتين في الجهة اليسرى). تم استخدام مقاربة عبر البريتوان بمساعدة الإنسان الآلي في جميع الحالات. تمت المحافظة على النسيج الكظري الطبيعي المجاور في جميع الحالات. تم جمع وتحليل المعطيات المتوافرة في الفترة ما حول الجراحة.
النتائج: بلغ متوسط مدة الجراحة 77.5 دقيقة (تراوح بين 40-140 دقيقة)، فيما بلغ متوسط كمية الدم المفقودة 97.5 مل (تراوحت بين 50-160 مل). لم يتم التحول للجراحة المفتوحة في أي من الحالات، كما لم يسجل تطور اختلاطات في الفترة ما حول الجراحة. بلغ متوسط حجم الورم 4.7 سم. تطورت لدى المرضى ثلاث نوب من ارتفاع التوتر الشرياني خلال الجراحة تطلبت إجراء تداخل علاجي. بلغ متوسط جرعات المسكنات اللازمة 150 ملغ من diclofenac، حيث سمح للمرضى بالتناول عبر الفم بعد 6 ساعات من الجراحة. تمت إزالة المفجر خلال 24 ساعة من العملية، كما بلغ متوسط مدة البقاء في المشفى 4 أيام. أكد الفحص النسيجي المرضي تشخيص ورم القواتم عند جميع المرضى مع حواف استئصال جراحية سليمة. تمت متابعة المرضى لمدة وسطية 9 أشهر (تراوحت بين 4-14 شهراً) مع عدم وجود دلائل على حدوث نكس أو تطور ورم خارج كظري.
الاستنتاجات: تمثل جراحة استئصال ورم القواتم بمساعدة الإنسان الآلي تقنية جيدة، آمنة وفعالة من خلال خبرتنا حديثة العهد في هذا الموضوع. يمكن من خلال هذه التقنية المحافظة على النسج الكظرية الطبيعية المجاورة للورم مع تأثير سلبي طفيف لذلك على فعالية الجراحة بالنسبة للورم. وهنا تظهر الحاجة لإجراء المزيد من الدراسات طويلة الأمد لتأكيد هذه النتائج.

Infectious Diseases

الإمراض الإنتانية

Acute Transverse Myelitis in Lyme Neuroborreliosis
التهاب النخاع المستعرض الحاد في سياق داء البورليات العصبي للايم

Bigi S, et al.
Infection 2010 May 27.

Introduction: Acute transverse myelitis (ATM) is a rare disorder (1-8 new cases per million of population per year), with 20% of all cases occurring in patients younger than 18 years of age. Diagnosis requires clinical symptoms and evidence of inflammation within the spinal cord (cerebrospinal fluid and/or magnetic resonance imaging). ATM due to neuroborreliosis typically presents with impressive clinical manifestations.
Case Presentation: Here we present a case of Lyme neuroborreliosis-associated ATM with severe MRI and CSF findings, but surprisingly few clinical manifestations and late conversion of the immunoglobulin G CSF/blood index of Borrelia burgdorferi sensu lato.
Conclusion: Clinical symptoms and signs of neuroborrelial ATM may be minimal, even in cases with severe involvement of the spine, as shown by imaging studies. The CSF/blood index can be negative in the early stages and does not exclude Lyme neuroborreliosis; if there is strong clinical suspicion of Lyme neuroborreliosis, appropriate treatment should be started and the CSF/blood index repeated to confirm the diagnosis.

المقدمة: يعتبر التهاب النخاع المستعرض الحاد من الاضطرابات النادرة الحدوث (تحدث 1-8 حالات جديدة لكل مليون شخص سنوياً)، كما أن 20% من مجمل الحالات تحدث عند أشخاص دون سن 18 من العمر. يتطلب التشخيص وجود أعراض سريرية موجهة مع دلائل على وجود التهاب في الحبل الشوكي (من خلال السائل الدماغي الشوكي و/أو التصوير بالرنين المغناطيسي MRI). يتظاهر التهاب النخاع المستعرض الحاد الناتج عن داء البورليات العصبي بتظاهرات سريرية فريدة عادةً.
عرض الحالة: سيتم هنا عرض حالة من داء البورليات العصبي للايم مترافقة مع التهاب في النخاع المستعرض مع موجودات واضحة جداً بالتصوير

بالرنين المغناطيسي وفحص السائل الدماغي الشوكي، ولكن مع تظاهرات سريرية قليلة بشكل يثير الاستغراب وتحول متأخر في مشعر الغلوبيولينات المناعية G بين السائل الدماغي الشوكي والدم لبورليات بوغدورفيري.

الاستنتاجات: قد تكون الأعراض والعلامات السريرية لالتهاب النخاع المستعرض الحاد الناتج عن داء البورليات العصبي طفيفة وذلك حتى في الإصابات الشديدة للنخاع الشوكي وهو ما تظهره الدراسات الشعاعية. قد يكون مشعر السائل الدماغي الشوكي/الدم سلبياً في المراحل المبكرة للداء، ولا ينفي بالضرورة تشخيص داء البورليات العصبي للايم، وبالتالي يجب البدء بالمعالجة المناسبة لهذا الداء عند وجود شك سريري قوي، مع إعادة إجراء مشعر السائل الدماغي الشوكي/الدم لتأكيد التشخيص.

Rheumatology And Orthopedics

الإمراض الرثوية وإمراض العظام

Efficacy and Safety of Naproxcinod in The Treatment of Patients With Osteoarthritis of The Knee

سلامة وفعالية عقار naproxcinod في معالجة الالتهاب العظمي المفصلي في مفصل الركبة

Schnitzer TJ,et al.
Osteoarthritis Cartilage 2010 Feb 16.

Objective: To evaluate the efficacy and safety of the cyclooxygenase-inhibiting nitric-oxide donator, naproxcinod, compared with naproxen and placebo in patients with osteoarthritis (OA) of the knee.

Methods: 918 eligible patients were randomly assigned to double-blind treatment with either naproxcinod 375mg, naproxcinod 750 mg, naproxen 500 mg or placebo, twice daily for 13 weeks. The primary objective was to show superiority of naproxcinod compared to placebo. Main efficacy criteria were assessment of pain and physical function using the Western Ontario and MacMaster Universities Osteoarthritis Index (WOMAC) and patients' overall rating of disease status (Likert scale). The main secondary objectives were to show that naproxcinod was non-inferior to naproxen 500 mg and to evaluate overall safety.

Results: Both doses of naproxcinod were statistically and clinically superior to placebo in relieving signs and symptoms of OA of the knee after 13 weeks of treatment, as demonstrated by all three co-primary endpoints (P</=0.0003). The evaluation of the other secondary efficacy measures was consistent with the primary endpoint results. Naproxcinod 750 mg was non-inferior to equimolar doses of naproxen 500 mg in the Intent-to-Treat (ITT) population. 24.5% of patients discontinued prematurely, with a higher incidence in the placebo group (18.6%) than the active groups (4.3-7.1%) discontinuing due to lack of efficacy. Both doses of naproxcinod were well-tolerated, with most adverse events being mild or moderate. Compared to placebo, naproxcinod 750 mg and 375 mg showed a similar blood pressure (BP) profile in contrast to naproxen which increased BP.

Conclusions: These results demonstrated the clinical efficacy and safety of naproxcinod in the management of the signs and symptoms of OA. Naproxcinod was well-tolerated, with BP effects similar to placebo and different from naproxen.

هدف البحث: تقييم سلامة وفعالية استخدام عقار naproxcinod –وهو من مثبطات الـ cyclooxygenase المانحة لأوكسيد النتريك – بالمقارنة مع naproxen والمعالجة الإرضائية عند مرضى الالتهاب العظمي المفصلي في مفصل الركبة.

طرق البحث: تم تقسيم مجموعة مكونة من 918 مريضاً بشكل عشوائي بشكل مزدوج التعمية إلى مجموعات للخضوع لإحدى المعالجات المكونة من:

naproxcinod بمقدار 375 ملغ، أو naproxcinod بمقدار 750 ملغ، أو naproxen بمقدار 500 ملغ، أو لمعالجة إرضائية وذلك بمعدل مرتين يومياً لمدة 13 أسبوعاً. تمثل الهدف الأساسي من هذه العملية إظهار أفضلية عقار naproxcinod بالمقارنة مع المعالجة الإرضائية. شملت المعايير الأساسية للفعالية تقييم الألم والحالة الوظيفية باستخدام مشعر WOMAC للالتهاب العظمي المفصلي وتقييم المرضى لحالة المرض لديهم (سلم Likert). أما الأهداف الثانوية فتمثلت في إظهار عدم وجود تراجع في الفعالية الدوائية باستخدام naproxcinod بالمقارنة مع استخدام naproxen (500 ملغ)، وتقييم السلامة بشكل عام.

النتائج: لوحظ أن كلتا الجرعتين المستخدمتين من عقار naproxcinod كان لها أفضلية إحصائياً وسريرياً في التخفيف من علامات وأعراض الالتهاب العظمي المفصلي في مفصل الركبة بعد 13 أسبوعاً من المعالجة وذلك بالمقارنة مع المعالجة الإرضائية وهو ما ظهر جلياً من خلال النقاط النهائية الثلاث الأساسية ($p \geq 0.0003$). كما أن تقييم مشعرات الفعالية الثانوية الأخرى كان متوافقاً مع نتائج النقاط النهائية الأساسية. لم يلاحظ أن استخدام naproxcinod (750 ملغ) كان أقل كفاءة من الجرعات المكافئة مولياً من naproxen (500 ملغ) في مجموعة تقصد المعالجة. توقف 24.5% من المرضى عن تناول الدواء بشكل مبكر، مع وجود نسبة أعلى في مجموعة المعالجة الإرضائية (18.6%) من مجموعات العلاج الفعال (4.3–7.1%) من الذين أوقفوا المعالجة نتيجة لعدم ملاحظة فعالية لها. لوحظ تحمل جيد لكل من جرعتي naproxcinod، كما أن معظم التأثيرات غير المرغوبة كانت خفيفة إلى متوسطة الشدة. وبالمقارنة مع المعالجة الإرضائية فقد أظهر naproxcinod بجرعة 750 ملغ و375 ملغ تأثيرات مشابهة على ضغط الدم وذلك بخلاف عقار naproxen الذي سبب زيادة في ضغط الدم.

الاستنتاجات: تظهر هذه النتائج وجود فعالية وسلامة سريرية لعقار naproxcinod في تدبير علامات وأعراض الالتهاب العظمي المفصلي. كما لوحظ أن هذا العقار جيد التحمل وله تأثيرات مشابهة للمعالجة الإرضائية ومخالفة لعقار naproxen على صعيد الضغط الدموي.

Neurology

الإمراض العصبية

A phase I/II Dose-Escalation Trial of Vitamin D3 and Calcium in Multiple Sclerosis

إعطاء جرعات متزايدة من الفيتامين D3 والكالسيوم عند مرضى التصلب اللويحي

Burton JM, et al.
Neurology 2010 Apr 28.

Objective: Low vitamin D status has been associated with multiple sclerosis (MS) prevalence and risk, but the therapeutic potential of vitamin D in established MS has not been explored. Our aim was to assess the tolerability of high-dose oral vitamin D and its impact on biochemical, immunologic, and clinical outcomes in patients with MS prospectively.

Methods: An open-label randomized prospective controlled 52-week trial matched patients with MS for demographic and disease characteristics, with randomization to treatment or control groups. Treatment patients received escalating vitamin D doses up to 40,000 IU/day over 28 weeks to raise serum [25(OH)D] rapidly and assess tolerability, followed by 10.000 IU/day (12 weeks), and further downtitrated to 0 IU/day. Calcium (1.200 mg/day) was given throughout the trial. Primary endpoints were mean change in serum calcium at each vitamin D dose and a comparison of serum calcium between groups. Secondary endpoints included 25(OH)D and other biochemical measures, immunologic biomarkers, relapse events, and Expanded Disability Status Scale (EDSS) score.

Results: Forty-nine patients (25 treatment, 24 control) were enrolled [mean age 40.5 years, EDSS 1.34, and 25(OH) D 78 nmol/L]. All calcium-related measures within and between groups were normal. Despite a mean peak 25(OH) D of 413 nmol/L, no significant adverse events occurred. Although there may have been confounding variables in clinical outcomes, treatment group patients appeared to have fewer relapse events and a persistent reduction in T-cell proliferation compared to controls.

Conclusions: High-dose vitamin D (approximately 10.000 IU/day) in multiple sclerosis is safe, with evidence of immunomodulatory effects. Classification of evidence: This trial provides Class II evidence that high-dose vitamin D use for 52 weeks in patients with multiple sclerosis does not significantly increase serum calcium levels when compared to patients not on high-dose supplementation. The trial, however, lacked statistical precision and the design requirements to adequately assess changes in clinical disease measures (relapses and Expanded Disability Status Scale scores), providing only Class level IV evidence for these outcomes.

هدف البحث: تترافق حالة انخفاض الفيتامين D مع انتشار التصلب اللويحي MS وخطورة تطوره، إلا أن الفائدة العلاجية لإعطاء الفيتامين D عند المرضى المشخصين بوجود حالة تصلب لويحي ما تزال غير معروفة. تهدف هذه الدراسة إلى تقييم تحمل مرضى التصلب اللويحي لجرعات عالية من الفيتامين D عبر الفم وتأثيراتها على النتائج المستقبلية الكيميائية الحيوية، المناعية والسريرية لديهم.

طرق البحث: تم إجراء دراسة عشوائية مستقبلية مفتوحة لمدة 52 أسبوعاً عند مجموعة من مرضى التصلب اللويحي MS مع وجود مجموعة شاهدة موافقة من حيث الخصائص السكانية والمرضية. خضع مرضى مجموعة العلاج إلى جرعات متصاعدة من الفيتامين D حتى جرعة 40000 وحدة دولية/يومياً، خلال 28 أسبوعاً وذلك لرفع مستويات 25–هيدروكسي فيتامين D في المصل بشكل سريع وتقييم تحمل هذه الجرعات، تبعها إعطاء 10000 وحدة دولية/يومياً (لمدة 12 أسبوعاً)، ومن ثم إنقاص الجرعة حتى 0 وحدة دولية/يومياً. تم إعطاء الكالسيوم بمقدار 1200 ملغ/يومياً طيلة مراحل الدراسة. شملت النتائج النهائية الأساسية متوسط التغير في مستوى الكالسيوم في المصل الموافق لكل جرعة من الفيتامين D، ومقارنة مستويات الكالسيوم المصلية بين المجموعتين. أما النتائج النهائية الثانوية فتضمنت قياس مستوى 25–هيدروكسي فيتامين D والقياسات الكيميائية الحيوية الأخرى، الواسمات المناعية، حوادث النكس، ومجموع نقاط سلم حالة العجز EDSS.

النتائج: شملت الدراسة 49 مريضاً (25 في مجموعة المعالجة و24 في مجموعة الشاهد) بمتوسط أعمار 40.5 سنة، قيمة نقاط سلم EDSS 1.34، مستوى 25–هيدروكسي فيتامين D 78 نانومول/ل. كانت جميع القياسات المتعلقة بالكالسيوم في كل مجموعة وبين المجموعتين طبيعية. وعلى الرغم من الوصول لمتوسط ذروة بلغ 413 نانومول/ل من 25–هيدروكسي فيتامين D إلا أن ذلك لم يترافق مع تأثيرات سلبية تستحق الذكر. ورغم إمكانية وجود عدة متغيرات معقدة تؤثر في النتائج السريرية إلا أن مجموعة المعالجة أظهرت حوادث نكس أقل وتراجع مستمر في انقسام الخلايا التائية بالمقارنة مع مجموعة الشاهد.

الاستنتاجات: يظهر هذا البحث سلامة إعطاء الفيتامين D بجرعات عالية (10000 وحدة دولية/يومياً) عند مرضى التصلب اللويحي، مع وجود تأثيرات معدلة للمناعة لهذه المعالجة. تعطي هذه الدراسة دليلاً من المرتبة II على أن إعطاء الفيتامين D بجرعات عالية لمدة 52 أسبوعاً عند مرضى التصلب اللويحي لا يؤدي إلى زيادة هامة في مستويات الكالسيوم في المصل بالمقارنة مع حالات الشاهد الغير موضوعين على هذه المعالجة الداعمة عالية الجرعة. إلا أن هذه الدراسة تعوزها الدقة الإحصائية والمتطلبات المتعلقة بنموذجها لتكون قادرة على تقييم التغيرات المتعلقة بالمرض (النكس ونقاط سلم EDSS) وبالتالي فهي تقدم دليلاً من الدرجة IV فقط بالنسبة لهذه النتائج.

Anaesthesia & Intensive Care Medicine

التخدير والعناية المركزة

Addition of Low-Dose Ketamine to Propofol-Fentanyl Sedation for Gynecologic Diagnostic Laparoscopy

إضافة جرعات منخفضة من ketamine للتركين باستخدام propofol-fentanyl خلال عمليات تنظير البطن التشخيصية في الأمراض النسائية

Tang YY, et al.
J Minim Invasive Gynecol 2010 May-June;17(3):325-330.

Study Objective: To assess the feasibility of propofol-fentanyl sedation protocol with ketamine for gynecologic diagnostic laparoscopy.

Design: Prospective, double-blind, randomized study (Canadian Task Force classification I).
Setting: Outpatient operating unit in a university hospital specializing in obstetrics and gynecology.
Patients: Eighty women who underwent outpatient gynecologic diagnostic laparoscopy.
Interventions: Patients were randomly assigned to receive fentanyl, 1 mug/kg, and normal saline solution (group F, n=40), or fentanyl, 1 mug/kg, and ketamine, 0.5 mg/kg (group FK, n=40), followed by propofol, 2.0 mg/kg, for sedation induction. During surgery, propofol was supplemented to achieve a target Ramsey score of 6, and cardiopulmonary support was required to maintain stable vital signs.
Measurements and Main Results: Five of 40 patients (12.5%) in group FK reported pain associated with propofol injection compared with 33 of 40 patients (82.5%) in group F. During surgery, 7 patients (17.5%) in group FK required rescue propofol compared with 32 patients (80.0%) in group F ($p<0.001$). The mean (SD) rescue dose of propofol was 0.4 (0.5) mg/kg in group FK compared with 1.6 (0.6) mg/kg in group F ($p<0.001$). In group F, 17 patients (42.5%) required assisted mask ventilation because of respiratory depression, and in 21 patients (52.5%), atropine therapy was necessary to treat bradycardia, compared with 6 patients (15.0%) and 11 patients (27.5%), respectively, in group FK ($p<0.05$). The mean arterial blood pressure at the end of induction, pneumoperitoneum inflation, and trocar insertion was significantly decreased in group F compared with group FK ($p<0.05$). No differences were observed between the 2 groups insofar as operation duration, recovery time, discharge time, intraoperative awareness, incidence of postoperative nausea and vomiting, and postoperative pain. Although patient satisfaction scores were comparable, a higher degree of gynecologist satisfaction was observed in group FK compared with group F ($p<0.001$).
Conclusion: Addition of low-dose ketamine to propofol-fentanyl sedation can provide more stable and satisfactory operation conditions in gynecologic diagnostic laparoscopy.

هدف البحث: تقييم جدوى إضافة ketamine لنظام التركين باستخدام propofol-fentanyl خلال عمليات تنظير البطن التشخيصية في الأمراض النسائية.
نمط البحث: دراسة مستقبلية، عشوائية مزدوجة التعمية (تصنيف I حسب Canadian Task Force).
مكان البحث: وحدة المرضى الخارجيين في مشفى جامعي متخصص بالأمراض النسائية والتوليد.
مرضى البحث: شمل البحث 80 مريضة خضعن لإجراء تنظير بطن نسائي تشخيصي كمرضى خارجيين.
التداخلات: تم تقسيم المريضات بشكل عشوائي إلى مجموعتين: المجموعة F (40 مريضة) وهي مجموعة إعطاء fentanyl (1 مكروغرام/كغ) مع المصل الملحي الفيزيولوجي، والمجموعة FK (40 مريضة) وهي مجموعة إعطاء fentanyl (1مكروغرام/كغ) مع ketamine (0.5 ملغ/كغ) يتبع ذلك في كلتا المجموعتين إعطاء propofol (2.0 ملغ/كغ) لتحريض التركين. تم خلال الجراحة إعطاء دعم بـ propofol للوصول للرقم 6 تبعاً لنقاط Ramsey، مع إجراء الدعم القلبي الرئوي للمحافظة على استقرار العلامات الحيوية.
القياسات والنتائج الأساسية: أوردت 40 مريضة (12.5%) في المجموعة FK حدوث ألم لدى حقن propofol بالمقارنة مع 33 مريضة من أصل 40 (بنسبة 82.5%) في المجموعة F. خلال الجراحة احتاجت 7 مريضات (17.5%) في المجموعة FK لجرعة داعمة من propofol بالمقارنة مع 32 مريضة (80.0%) في المجموعة F ($p<0.001$). بلغ متوسط الجرعة الداعمة (والانحراف المعياري) 0.4 (0.5) ملغ/كغ في المجموعة FK بالمقارنة مع 1.6 (0.6) ملغ/كغ في المجموعة F ($p<0.001$). احتاجت 17 مريضة في المجموعة F (بنسبة 42.5%) إلى تهوية داعمة عبر القناع نتيجة لتطور تثبيط تنفسي، كما احتاجت 21 مريضة (52.5%) إلى المعالجة بإعطاء atropine لمعالجة حالة بطئ قلب بالمقارنة مع 6 مريضات (15.0%) و 11 مريضة (27.5%) على الترتيب في المجموعة FK ($p<0.05$). لوحظ أن الضغط الشرياني الوسطي في نهاية التحريض، عملية نفخ البريتوان وإدخال المبزل (trocar) كان منخفضاً وبشكل هام في المجموعة F بالمقارنة مع المجموعة FK ($p<0.05$). لم يلاحظ وجود فروقات هامة بين المجموعتين بالنسبة لمدة العملية، مدة الصحو، الوقت اللازم للخروج من المشفى، حالة الوعي خلال العملية، تواتر حدوث الغثيان والإقياء بعد العملية، والألم بعد العملية. وعلى الرغم من وجود تشابه بين المجموعتين من حيث النقاط المعبرة عن رضى المريضات عن العملية، إلا أنه لوحظت درجة أكبر من اقتناع الأطباء القائمين بالإجراء في المجموعة FK مقارنةً مع المجموعة F ($p<0.001$).
الاستنتاجات: يمكن لإضافة جرعة منخفضة من ketamine إلى نظام التركين المعتمد على propofol-fentanyl أن يوفر شروطاً أكثر استقراراً وإقناعاً خلال عمليات تنظير البطن التشخيصية في الأمراض النسائية.

Ophthalmology

الإمراض العينية

Changes in Intraocular Pressure and Anterior Segment Morphometry After Uneventful Phacoemulsification Cataract Surgery

التبدلات الملاحظة في الضغط داخل المقلة والقياسات الشكلية للقطعة الأمامية إثر جراحة استحلاب العدسة في حالات الساد العيني

Dooley I, et al.
Eye (Lond) 2010 Feb 19.

Purpose: To study changes in anterior segment morphometry after uneventful phacoemulsification cataract surgery, and to investigate whether there is a relationship between any observed changes and intraocular pressure (IOP) reduction after the procedure.
Methods: The anterior chamber depth (ACD), anterior chamber volume (ACV), anterior chamber angle (ACA), central corneal thickness (CCT), and IOP were measured in 101 non-glaucomatous eyes before and after uneventful phacoemulsification cataract surgery.
Results: After cataract surgery, the mean ACD, ACV, and ACA values increased by 1.08 mm, 54.4 mm(3), and 13.1 degrees, respectively, and the mean IOP (corrected for CCT) decreased by 3.2 mm Hg. The predictive value of a previously described index (preoperative ACD/preoperative IOP (corrected for CCT) or CPD ratio) for IOP (corrected for CCT) reduction after cataract surgery was confirmed, reflected in an r(2) value of 23.3% between these two parameters (P<0.001). Other indices predictive of IOP reduction after cataract surgery were also identified, including preoperative IOP/preoperative ACV and preoperative IOP/preoperative ACA, reflected in r(2) values of 13.7 and 13.7%, respectively (P<0.001 and P<0.001, respectively).
Conclusions: Our study confirms the predictive value of the CPD ratio for IOP reduction after cataract surgery, and may contribute to the decision-making process in patients with glaucoma or ocular hypertension. Furthermore, two novel indices of preoperative parameters that are predictive for IOP reduction after cataract surgery were identified, and enhance our understanding of the mechanisms underlying IOP changes after this procedure.

هدف البحث: دراسة التبدلات في القياسات الشكلية للقطعة الأمامية إثر جراحة استحلاب العدسة phacoemulsification لمعالجة الساد العيني واستقصاء وجود علاقة بين التبدلات الملاحظة والتراجع في الضغط داخل المقلة IOP بعد العملية.
طرق البحث: تم قياس عمق الحجرة الأمامية ACD، حجم الحجرة الأمامية ACV، زاوية الحجرة الأمامية ACA، سماكة القرنية المركزية CCT والضغط داخل المقلة IOP في 101 من الأعين غير المصابة بالزرق (ارتفاع توتر باطن العين) وذلك قبل وبعد إجراء جراحة استحلاب العدسة.
النتائج: لوحظ بعد إجراء جراحة الساد ارتفاع القيم الوسطية لقياس عمق الحجرة الأمامية ACD، حجم الحجرة الأمامية ACV، زاوية الحجرة الأمامية ACA بمقدار 1.08 ملم، 54.4 ملم^3 و13.1 درجة على الترتيب، كما تناقص متوسط الضغط داخل المقلة IOP (المصحح بالنسبة لـ CCT) بمقدار 3.2 ملم.زئبق. تم تأكيد الدور التنبؤي للمشعر الموضوع سابقاً (عمق الحجرة الأمامية ACD قبل الجراحةالضغط داخل المقلة IOP قبل الجراحة المصحح بالنسبة لـ CCT أو نسبة CPD) في تراجع الضغط داخل المقلة بعد جراحة الساد وهو ما تعكسه قيمة r(2) البالغة 23.3% بين هذين القياسين (p<0.001). كما تم تعريف مشعرات تنبؤية أخرى لانخفاض الضغط داخل المقلة IOP بعد جراحة الساد والتي تتضمن ما يلي: (الضغط داخل المقلة قبل الجراحةحجم الحجرة الأمامية ACV قبل الجراحة)، (الضغط داخل المقلة قبل الجراحةزاوية الحجرة الأمامية ACA قبل الجراحة) الذين تعكسهما قيمة r(2) البالغة 13.7% لكل منهما (p<0.001 و p<0.001 على الترتيب).
الاستنتاجات: تؤكد هذه الدراسة القيمة التنبؤية للنسبة CPD لانخفاض الضغط داخل المقلة IOP بعد جراحة الساد، كما أن هذه النسبة قد تساهم في

عملية وضع قرار حول الحالة عند مرضى الزرق أو فرط توتر العين. علاوةً على ذلك فقد تم تعريف اثنين من الثوابت التنبؤية الواعدة قبل الجراحة والتي تفيد في التنبؤ بانخفاض الضغط داخل المقلة بعد جراحة الساد، كما أن هذه الدراسة قد عززت من فهمنا للآليات الكامنة وراء التبدلات الطارئة على الضغط داخل المقلة بعد الجراحة.

Dermatology

الإمراض الجلدية

Low Dose of Acyclovir May be an Effective Treatment Against Pityriasis Rosea

فائدة الجرعات المنخفضة من acyclovir في معالجة حالات النخالية الوردية

Rassai S, et al.
J Eur Acad Dermatol Venereol 2010 May 7.

Background: Pityriasis rosea (PR) is a papulosquamous disease with an unknown aetiology, but recently the role of two herpes viruses human herpes virus 6 and human herpes virus 7 was defined as being the aetiology of PR.
Objective: The aim of this study was to compare a low dose (400 mg five times a day for a week) anti-viral agent, acyclovir, with follow-up protocol for the treatment of PR.
Methods: A randomized, investigator-blind, prospective, 4-week study was designed. Sixty-four patients with PR presenting at the outpatient clinic were randomly allocated to acyclovir (400 mg five times a day for 1 week) or follow-up group. Fifty-four of them completed the period of study and their clinical responses such as improvement rate of erythema, and scaling and occurrence of complications were evaluated by two dermatologists using weekly photographic records.
Results: Statistically, acyclovir was more effective than follow-up in reducing erythema at the end of the first, second, third and fourth week of treatment. Although the decrease in scaling was higher in the acyclovir group at the end of the first, second and third week of treatment, there was no statistical significance between two groups at the end of fourth week of treatment in the both groups.
Conclusions: According to our study, acyclovir may be more effective than follow-up in reducing erythema and shortening of duration of PR even in lower doses than was applied in previous studies. So given the safety of acyclovir, we suggest to our colleagues to consider this treatment when facing a patient suffering from this conundrum, at least in extensive or having pruritus ones.

خلفية البحث: تعتبر النخالية الوردية PR من الأمراض الجلدية مجهولة السبب التي تتظاهر باندفاعات حطاطية حرشفية، ولكن مؤخراً تم كشف دور اثنين من فيروسات الحلأ البشري (فيروس الحلأ البشري 6 و7) كعوامل مسببة للنخالية الوردية.
هدف البحث: يهدف هذا البحث إلى مقارنة إعطاء جرعة منخفضة (400 ملغ خمس مرات يومياً لمدة أسبوع) من عقار acyclovir وهو من المضادات الفيروسية مع حالة اعتماد خطة متابعة في معالجة حالات النخالية الوردية.
طرق البحث: تم إجراء دراسة عشوائية، معماة، مستقبلية لمدة 4 أسابيع. شمل البحث 64 من مرضى النخالية الوردية في العيادة الخارجية تم توزيعهم بشكل عشوائي ضمن مجموعتين: مجموعة إعطاء acyclovir (400 ملغ خمس مرات يومياً لمدة أسبوع)، ومجموعة المتابعة. أتم 54 من المرضى مدة الدراسة حيث قام أخصائيان بالأمراض الجلدية بتقييم الاستجابة السريرية الملاحظة في كل حالة من حيث تحسن معدلات الحمامى، تقشر الآفة وحدوث الاختلاطات وذلك عبر سجلات صورية فوتوغرافية أسبوعية.
النتائج: لوحظ من الناحية الإحصائية أن عقار acyclovir أكثر فعالية بالمقارنة مع المتابعة في الحد من الحمامى في نهاية الأسبوع الأول، الثاني، الثالث والرابع من المعالجة. وعلى الرغم من أن تقشر الآفات كان أوضح لدى مجموعة المعالجة بـ acyclovir في نهاية الأسبوع الأول، الثاني والثالث من المعالجة، إلا أنه لم تلاحظ فروقات هامة إحصائياً بين المجموعتين في نهاية الأسبوع الرابع من العلاج.

الاستنتاجات: تبعاً لنتائج هذه الدراسة فإن استخدام acyclovir قد يكون أكثر فعالية بالمقارنة مع متابعة الحالة في الحد من الحمامى وتقليل مدة الآفات في حالات النخالية الوردية وذلك حتى عند تطبيق جرعات أخفض من تلك المطبقة في الدراسات السابقة. وبالنظر لسلامة استخدام هذا العقار فإن هذه الدراسة تنصح الممارسين بأخذ هذه المعالجة بعين الاعتبار لدى التعامل مع حالات النخالية الوردية وخاصةً الآفات المنتشرة أو الحاكة.

Diagnostic Radiology

التشخيص الشعاعي

Diagnostic Accuracy of Panoramic Radiography in Determining Relationship Between Inferior Alveolar Nerve and Mandibular Third Molar

الدقة التشخيصية للصورة الشعاعية البانورامية في تحديد العلاقة بين العصب السنخي السفلي والرحى الثالثة

Atieh MA.
J Oral Maxillofac Surg 2010 Jan;68(1):74-82.

Purpose: The aim of this review was to determine the diagnostic accuracy of panoramic radiographic markers in the detection of the relationship between the mandibular canal and third molar roots.
Materials And Methods: A literature search of electronic databases, Cochrane Oral Health Group's Trials Register, National Research Register, conference proceedings, and abstracts was performed to identify studies that had investigated the diagnostic accuracy of the 3 panoramic radiographic markers (ie, darkening of the root, interruption of the radiopaque borders, and diversion of the mandibular canal). RevMan, version 5.0, and Meta-DiSc software programs were used for the pooled analyses and the construction of a summary receiver operating characteristic curve.
Results: A total of 5 studies were included, involving 894 observations. The overall pooled sensitivity and specificity for darkening of the root was calculated as 51.2% (95% confidence interval [CI] 42% to 60%) and 89% (95% CI 87% to 90%), respectively. The interruption of radiopaque borders showed a pooled sensitivity of 53.5% (95% CI 78.1% to 81.8%) and a pooled specificity of 80% (95% CI 78.1% to 81.8%). The diversion of the canal criterion had a pooled sensitivity of 29.4% (95% CI 21.8% to 38.1%) and a pooled specificity of 94.7% (95% CI 93.6% to 95.7%). The area under the receiver operating characteristic curve was 70% to 77%.
Conclusions: The results of this meta-analysis suggest a reasonable diagnostic accuracy for panoramic radiography in the preoperative evaluation of the relationship between third molars and the canal. Additional studies are needed to examine a more accurate, accessible, and cost-effective initial radiographic technique before third molar surgery.

هدف البحث: تهدف هذه المراجعة إلى تحديد الدقة التشخيصية للعلامات الشعاعية الملاحظة على الصورة البانورامية في تحديد العلاقة بين قناة الفك السفلي وجذور الرحى الثالثة.
مواد وطرق البحث: تم إجراء بحث في الأدب الطبي ضمن البيانات الرقمية والتي شملت: سجلات الأبحاث المسجلة في مكتبة Cochrane حول صحة الفم، سجلات الأبحاث الوطنية، نتائج عمال اللقاءات العملية والملخصات البحثية. تم تحليل هذه البيانات لتحديد الدراسات التي قامت باستقصاء الدقة التشخيصية لثلاث من العلامات الشعاعية على الصورة البانورامية (زيادة اسوداد الجذر، تقطع الحواف الظليلة للأشعة وتحول قناة الفك السفلي). تم استخدام النسخة 0.5 من برنامج RevMan، وبرنامج Meta-DiSc لتحليل البيانات وإنشاء منحني عمل مميز.
النتائج: تم تضمين 5 دراسات تضمنت 894 من الملاحظات. تم حساب الحساسية والنوعية التراكمية الإجمالية لزيادة اسوداد جذر الرحى حيث بلغتا 51.2% (بفواصل ثقة 95%، 42-60%)، و89% (بفواصل ثقة 95%، 87-90%) على الترتيب، في حين أظهر تقطع الحواف الظليلة للأشعة حساسية 53.5% (بفواصل ثقة 95%، 78.1-81.8%) ونوعية 80% (بفواصل ثقة 95%، 78.1-81.8%). أما تحول قناة الفك السفلي فقد أظهر

حساسية 29.4% (بفواصل ثقة 95%، 21.8-38.1%) ونوعية 94.7% (بفواصل ثقة 95%، 93.6 –95.7%). بلغت المنطقة تحت منحني العمل المميز 70-77%.

الاستنتاجات: تقترح نتائج هذه المراجعة البحثية وجود دقة تشخيصية معقولة للصورة الشعاعية البانورامية في التقييم قبل الجراحي للعلاقة بين الرحى الثالثة وقناة الفك السفلي. يجب إجراء المزيد من الدراسات للتوصل لتقنية شعاعية أكثر دقة، قابلة للتطبيق ومجدية من الناحية الاقتصادية لاعتمادها قبل الجراحات المجراة على الرحى الثالثة.

Psychiatry

الطب النفسي

Genetic Association of the AKT1 Gene With Schizophrenia in a British Population

الارتباط المورثي بين مورثة AKT1 والفصام عند المرضى البريطانيين

Mathur A, et al.
Psychiatr Genet 2010 Apr 23.

Objectives: A number of studies have reported a genetic association of the AKT1 gene with schizophrenia, although some have failed to replicate the AKT1 association. This study was undertaken to further explore the AKT1 association with more single nucleotide polymorphisms in a British sample.

Methods: A total of 221 families, consisting of 148 fathers, 204 mothers and 222 offspring affected with schizophrenia, were recruited for genetic analysis. Analysis for allelic and haplotypic associations was performed with the UNPHASED program, using likelihood-based association analysis for nuclear families with missing parental genotype data.

Results: Allelic association was detected at rs1130214 (chi=6.28, P=0.012) and at rs11847866 (chi=4.64, P=0.031), although the remaining single nucleotide polymorphisms did not show allelic association with schizophrenia. The global P value of overall associations was 0.059 after 10000 permutations. Assessment using the Haploview program revealed rs1130214, rs2494746 and rs11847866 in the same linkage disequilibrium block and haplotype analysis showed disease association for the rs1130214-rs2494746-rs11847866 haplotypes (chi=10.18, d.f.=4, P=0.037), of which the T-G-A haplotype was excessively transmitted (chi=6.93, uncorrected P=0.008) and this haplotypic association survived Bonferroni correction (P=0.04).

Conclusion: The present results provide further evidence to support the AKT1 association with schizophrenia.

هدف البحث: أظهرت عدد من الدراسات وجود ارتباط مورثي بين مورثة AKT1 وحالات الفصام schizophrenia، رغم أن دراسات أخرى قد فشلت في إظهار هذا الترابط. أجريت هذه الدراسة لكشف الترابط بين مورثة AKT1 وعدد من التعدديات الشكلية مفردة النكليوتيد وذلك في عينة من المرضى البريطانيين.

طرق البحث: تم إجراء التحليل المورثي لـ 221 عائلة مكونة (148 من الآباء و204 من الأمهات)، لديهم 222 من الأولاد المصابين بالفصام. تم إجراء التحليل لكشف الترابط الأليلي allelic والفرداني haplotypic بواسطة برنامج UNPHASED، وذلك من خلال تحليل الترابط المحتمل للعائلات التي يوجد نقص في معلومات النمط الوراثي للأبوين.

النتائج: لوحظ وجود ترابط أليلي عند الموقع rs1130214 (chi=6.28، p=210.0) وفي rs11847866 (chi=4.64، p=0.031)، وذلك على الرغم من عدم إظهار التعدديات الشكلية مفردة النكليوتيد الأخرى لترابط أليلي مع الفصام. لوحظ أن قيمة p الإجمالية لجميع الارتباطات بلغت 0.059 وذلك بعد 10000 طفرة. أظهر التقييم من خلال برنامج Haploview وجود كل من rs1130214، rs2494746 و rs11847866 في نفس وحدات الارتباط

غير المتوازن، كما أظهر تحليل النمط الفرداني ترافق المرض مع الأنماط الفردانية haplotypes التالية (rs11847866–rs2494746–rs1130214) (p=0.037، d.f=4، chi=10.18)، حيث يتم انتقال النمط الفرداني T-G-A بشكل مفرط (chi=6.93، قيمة p غير المصححة تعادل 0.008)، كما أن هذا الترافق يحقق تصحيح Bonferroni (p=0.04).

الاستنتاجات: تقدم نتائج هذه الدراسة دليلاً يدعم فكرة الترافق بين مورثة AKT1 وحالات الفصام.

ENT

إمراض الإذن والإنف والحنجرة

Overexpression of Glucocorticoid Receptor-Beta in Severe Allergic Rhinitis
زيادة التعبير عن مستقبلات الستيروئيدات السكرية بيتا عند مرضى الحالات الشديدة من التهاب الأنف الأرجي

Ishida A, et al.
Auris Nasus Larynx 2010 Feb 23.

Objective: To clarify the role of glucocorticoid receptor-beta in resistance to glucocorticoid therapy for allergic rhinitis, we studied 37 tissue samples from 20 patients with severe allergic rhinitis, and samples from age-matched controls.

Methods: Patients were treated with intranasal fluticasone for 6 months and inferior turbinectomy was performed for patients with poor response to glucocorticoid treatment. The expression of glucocorticoid receptor-alpha (GR-alpha), glucocorticoid receptor-beta (GR-beta), and nuclear factor-kappaB (NF-kappaB) in nasal mucosa was studied immunohistochemically.

Results: GR-alpha and NF-kappaB were expressed to a similar extent in patients and controls, but GR-beta was expressed significantly more in patients, resulting in an increased GR-beta/GR-alpha ratio.

Conclusion: Our findings suggest that GR-beta plays an important role in resistance to glucocorticoid therapy for allergic rhinitis, and its expression might be used as an additional parameter indicating steroid resistance in allergic rhinitis.

هدف البحث: بغية توضيح دور مستقبلات الستيروئيدات السكرية بيتا في تطور المقاومة للمعالجة بالستيروئيدات السكرية في حالات التهاب الأنف الأرجي فقد تمت دراسة 37 عينة من العينات النسيجية المأخوذة من 20 مريضاً يعانون من حالة شديدة من التهاب الأنف الأرجي، مع عينات أخرى مأخوذة من حالات شاهد مشابهة للمرضى من حيث العمر.

طرق البحث: تمت معالجة المرضى بإعطاء fluticasone داخل الأنف لمدة 6 أشهر مع إجراء استئصال للقرين السفلي عند المرضى ذوو الاستجابة الضعيفة للمعالجة بالستيروئيدات السكرية. تم من خلال الكيمياء النسيجية المناعية دراسة التعبير عن المستقبلات ألفا للستيروئيدات السكرية (GR-alpha، المستقبلات بيتا للستيروئيدات السكرية (GR-beta) والعامل النووي كابا (NF-kappaB) في مخاطية الأنف.

النتائج: لوحظت درجة متشابهة من التعبير بين مجموعة المرضى ومجموعة الشاهد بالنسبة للمستقبلات ألفا والعامل النووي كابا، أما بالنسبة للمستقبلات بيتا فقد لوحظ وجود تعبير أكبر وبشكل هام لدى مجموعة المرضى وهو ما يسبب زيادة في النسبة بين المستقبلات بيتا والمستقبلات ألفا (النسبة GR-beta/GR-alpha).

الاستنتاجات: تقترح هذه الموجودات وجود دور للمستقبلات بيتا في المقاومة للمعالجة بالستيروئيدات السكرية عند مرضى التهاب الأنف الأرجي، كما أن التعبير عن هذه المستقبلات قد يستخدم كمشعر إضافي يشير إلى المقاومة للستيروئيدات عند مرضى التهاب الأنف الأرجي.

دليل النشر في مجلة المجلس العربي للاختصاصات الصحية

تتبع المقالات المرسلة إلى مجلة المجلس العربي للاختصاصات الصحية الخطوط التالية المعتمدة من قبل الهيئة الدولية لمحرري المجلات الطبية URM، وإن النص الكامل لها موجود على الموقع الألكتروني 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- تخضع كافة المقالات المرسلة إلى المجلة للتقييم من قبل لجنة تحكيم مؤلفة من عدد من الاختصاصيين، بشكل ثنائي التعمية، بالإضافة إلى تقييمها من قبل هيئة التحرير. يمكن للمقالات أن تقبل مباشرة بعد تحكيمها، أو تعاد إلى المؤلفين لإجراء التعديلات المطلوبة، أو ترفض.

3- تقبل المقالات باللغتين العربية أو الانكليزية. يجب أن ترسل صفحة العنوان باللغتين العربية والانكليزية، متضمنة عنوان المقال وأسماء الباحثين بالكامل باللغتين مع ذكر صفاتهم العلمية. يجب استخدام الأرقام العربية (1، 2، 3...) في كافة المقالات.

4- يجب أن تطابق المصطلحات الطبية الواردة باللغة العربية ما ورد في المعجم الطبي الموحد (موجود على الموقع الالكتروني www.emro.who.int/umd/ أو 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 حالات الضرورة التي توجب الحصول على موافقة المريض عند الكشف عن هويته بالصور أو غيرها.

6- تذكر أسماء الباحثين الذين شاركوا في البحث بصورة جدية، يجب تحديد باحث أو أثنين للتكفل بموضوع المراسلة حول الشؤون المتعلقة بالبحث مع ذكر عنوان المراسلة والبريد الالكتروني.

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، النص، ومن ثم الشكر والمراجع، 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 مكتنز CD، مع إرسال 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 لا يتجاوز 250 كلمة يشمل أربع فقرات على الشكل التالي: هدف الدراسة، طريقة الدراسة، النتائج، والاستنتاجات.
- البحث الأصيل يجب ألا يتجاوز 4000 كلمة (عدا المراجع)، وأن يتضمن الأجزاء التالية: المقدمة، طرق البحث، النتائج، المناقشة، والاستنتاجات. يجب إيراد شرح وافي عن طريقة الدراسة مع تحديد مجموعة الدراسة وكيفية اختيارها، وذكر الأدوات والأجهزة 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 التحقق من نتائج الدراسة. يجب ذكر الأسس العلمي لكافة الأدوية والمواد الكيميائية المستخدمة، مع تحديد الجرعات وطرق الإعطاء المعتمدة. يجب استخدام الجداول والصور والأشكال لدعم موضوع المقال، كما يمكن استخدام الأشكال كبديل عن الجداول مع مراعاة عدم تكرار نفس المعطيات في الجداول والأشكال. يجب أن يتناسب عدد الجداول والأشكال المستخدمة مع طول المقال، ومن المفضل عموماعدم استخدام أكثر من ستة جداول في المقال الواحد. يجب أن تتضمن المناقشة النقاط الهامة في الدراسة والاستنتاجات المستخلصة منها، مع ذكر تطبيقات وانعكاسات النتائج ومحدوديتها، مع مقارنة نتائج الدراسة بدراسات مماثلة، مع تجاوب دراسات غير مثبتة 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. مع ضرورة إيراد ملخص موجز عن الحالة.
- تقبل اللوحات الطبية النادرة ذات القيمة التعليمية.
- يمكن استعمال الاختصارات المعروفة فقط، يجب ذكر التعبير الكامل للاختصار عند وروده الأول في النص باستثناء وحدات 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 الأشخاص الذين أدوا مساعدات تقنية، مع ضرورة ذكر الجهات الداعمة من حيث توفير المواد أو الدعم المالي.
- المراجع يجب أن ترقم بشكل تسلسلي حسب ورودها في النص، ترقم المراجع المذكورة في الجداول والأشكال حسب موقعها في النص. يجب أن تتضمن المراجع أحدث ما نشر من معلومات. تختصر أسماء المجلات حسب ورودها في Index Medicus ، يمكن الحصول على قائمة الاختصارات من الموقع الالكتروني www.nlm.nih.gov يجب أن تتضمن المراجع المكتوبة معطيات كافية تمكن من الوصول إلى المصدر الرئيسي، مثال: مرجع المجلة الطبية يتضمن اسم الكاتب (يتضمن جميع المشاركين)، عنوان المقال، اسم المجلة، سنة الإصدار، رقم المجلد ورقم الصفحة. أما مرجع الكتاب فيتضمن اسم الكاتب (جميع المشاركين)، المحرر، الناشر، مؤسسة النشر ومكانها، رقم الجزء ورقم الصفحة. للحصول على تفاصيل أوفى حول كيفية كتابة المراجع الأخرى يمكن زيارة الموقع الالكتروني www.icmje.org مع التأكيد على مسؤولية الكاتب عن دقة المراجع الواردة في المقال.

8- إن المقالات التي لا تحقق النقاط السابقة تعاد إلى الكاتب لتصحيحها قبل إرسالها إلى هيئة التحكيم.

هذه المجلة مفهرسة في سجل منظمة الصحة العالمية IMEMR Current Contents
http://www.emro.who.int/HIS/VHSL/Imemr.htm

مجلة المجلس العربي للاختصاصات الصحية

مجلة المجلس العربي للاختصاصات الصحية هي مجلة طبية محكمة تصدر كل ثلاثة أشهر، تعنى بكافة الاختصاصات الطبية، تهدف إلى نشر أبحاث الأطباء العرب لتقوية التبادل العلمي والطبي بين البلدان العربية، كما تقوم المجلة أيضاً بنشر ملخصات منتقاة من المقالات المهمة المنشورة في المجلات العلمية والطبية العالمية، مع ترجمة هذه الملخصات إلى اللغة العربية بهدف تسهيل إيصالها إلى الطبيب العربي. علاوة على ذلك تعمل المجلة على نشر أخبار وأنشطة المجلس العربي للاختصاصات الصحية .

ترسل كافة المراسلات إلى العنوان التالي:

مجلة المجلس العربي للاختصاصات الصحية

المجلس العربي للاختصاصات الصحية

ص.ب: 7669 دمشق – الجمهورية العربية السورية

هاتف: 6119249/6119742-11-963+ ، فاكس: 6119739/6119259-11-963+

E-mail: jabms@scs-net.org


جامعة
الدول العربية

أخبار وأنشطة المجلس العربي للاختصاصات الصحية

خلال الفترة من 2010/4/1 لغاية 2010/6/30

أخبار وأنشطة المجلس العربي للاختصاصات الصحية
خلال الفترة من 2010/4/1 لغاية 2010/6/30
أنشطة المجالس العلمية

اجتماع المكتب التنفيذي

عقد المكتب التنفيذي للهيئة العليا للمجلس العربي للاختصاصات الصحية اجتماعه في دمشق خلال الفترة 26-2010/5/27 حيث ناقش السادة الأعضاء المواضيع المدرجة على جدول الأعمال وأهمها النظام الإداري والمالي للمجلس العربي للاختصاصات الصحية، ومحضر اجتماع اللجنة المشكلة لهذا الغرض وبعض المواضيع الأخرى، واتخذ السادة الأعضاء العديد من القرارات الهامة التي سيتم عرضها في اجتماع الهيئة العليا القادم.

اختصاص الأمراض الباطنة

1- الامتحان السريري والشفوي لاختصاص أمراض القلب والأوعية الدموية:

جرى الامتحان السريري والشفوي لاختصاص أمراض القلب والأوعية الدموية في مركز دمشق-الجمهورية العربية السورية بتاريخ 2010/4/5. وقد تقدم لهذا الامتحان 6 أطباء، نجح منهم 4 أطباء، أي أن نسبة النجاح هي 66%.

2- اجتماع لجنة الامتحانات لاختصاص أمراض القلب والأوعية الدموية:

تم اجتماع لجنة وضع أسئلة الامتحان النهائي الكتابي لاختصاص أمراض القلب والأوعية الدموية في مركز دمشق بتاريخ 6-2010/4/8.

3- الامتحان السريري والشفوي لاختصاص الأمراض الباطنة:

جرى الامتحان السريري والشفوي لاختصاص الأمراض الباطنة في مركز الدوحة- دولة قطر. وقد تقدم لهذا الامتحان 34 طبيباً، نجح منهم 15 طبيباً، أي أن نسبة النجاح هي 44%.

اختصاص طب الطوارئ

- الامتحان الأولي الكتابي لاختصاص طب الطوارئ:

جرى الامتحان الأولي الكتابي لاختصاص طب الطوارئ بتاريخ 2010/6/7 في كل من المراكز التالية: قطر، وبغداد، ودمشق. ولم تصدر النتائج بعد.

ختصاص الطب النفسي

1- الامتحان الأولي الكتابي لاختصاص الطب النفسي:

عقد الامتحان الأولي الكتابي لاختصاص الطب النفسي يوم السبت الموافق لـ2010/5/8 في المراكز الامتحانية التالية: دمشق، والقاهرة، والخبر، والدوحة، والخرطوم. وقد تقدم لهذا الامتحان 55 طبيباً، نجح منهم 40 طبيباً، أي أن نسبة النجاح هي 72%. وفيما يلي نسب النجاح حسب المراكز الامتحانية التالية:

اسم المركز	عدد المتقدمين	عدد الناجحين	%
دمشق	5	2	%40
القاهرة	5	2	%40
الخبر	12	12	%100
الدوحة	20	16	%80
الخرطوم	13	8	%61
المجموع	55	40	%72

2- اجتماع لجنة الامتحانات لاختصاص الطب النفسي:

اجتمعت لجنة الامتحانات لوضع أسئلة امتحان الجزء النهائي الكتابي لاختصاص الطب النفسي لدورة تشرين الثاني/2010 خلال الفترة الواقعة ما بين 26-2010/6/28 في مقر الأمانة العامة- دمشق- الجمهورية العربية السورية.

اختصاص التشخيص الشعاعي

1- الامتحان الأولي لاختصاص التشخيص الشعاعي:

عقد الامتحان الأولي لاختصاص التشخيص الشعاعي الدورة الثانية لامتحان الجزء الأول بتاريخ 2010/4/15 في المراكز التالية: دمشق، وصنعاء، والدوحة، والرياض، وعمان، وطرابلس. وقد تقدم لهذا الامتحان 64 طبيباً، نجح منهم 30 طبيباً، أي أن نسبة النجاح هي 47%. وفيما يلي نسب النجاح حسب المراكز الامتحانية التالية:

اسم المركز	عدد المتقدمين	عدد الناجحين	%
دمشق	12	1	%8.3
الدوحة	9	6	%66
صنعاء	7	4	%57
الرياض	7	4	%57
عمان	23	12	%52
طرابلس	6	3	%50
المجموع	64	30	%47

اختصاص جراحة الفم والوجه والفكين

1- اجتماع لجنة الامتحانات لاختصاص جراحة الفم والوجه والفكين:

اجتمعت لجنة الامتحانات لاختصاص جراحة الفم والوجه والفكين في دمشق خلال الفترة 4-2010/5/6 حيث تم في هذا الاجتماع وضع أسئلة امتحان الجزء الأول لدورتي نيسان-تشرين الأول/2010 وأسئلة الامتحان النهائي الكتابي لدورة تشرين الأول/2010.

2- الامتحان السريري والشفوي لاختصاص جراحة الفم والوجه والفكين (دورة استثنائية):

عقد الامتحان السريري والشفوي لاختصاص جراحة الفم والوجه والفكين في دمشق دورة استثنائية بتاريخ 2010/5/5، وقد تقدم للامتحان 4 أطباء، نجح منهم 4 أطباء، أي أن نسبة النجاح هي 100%.

3- الامتحان الأولي لاختصاص جراحة الفم والوجه والفكين:

عقد الامتحان الأولي لاختصاص جراحة الفم والوجه والفكين في مركز دمشق بتاريخ 2010/5/16، وقد تقدم للامتحان 25 طبيباً، نجح منهم 19 طبيباً، أي أن نسبة النجاح هي 76%.

اختصاص التخدير والعناية المركزة

- الامتحان السريري لاختصاص التخدير والعناية المركزة:

عقد الامتحان السريري لاختصاص التخدير والعناية المركزة بتاريخ 10-2010/4/12 في مشفى الأسد الجامعي- دمشق- الجمهورية العربية السورية. وقد تقدم لهذا الامتحان 33 طبيباً، نجح منهم 16 طبيباً، أي أن نسبة النجاح هي 48%.

اختصاص الجراحة

1- الامتحان السريري والشفوي لاختصاص جراحة الأطفال:

عقد الامتحان السريري والشفوي لاختصاص جراحة الأطفال بتاريخ 2010/4/10 في مركز دمشق- الجمهورية العربية السورية. وقد تقدم لهذا الامتحان 4 أطباء، نجحوا جميعاً، أي أن نسبة النجاح هي 100%.

2- اجتماع لجنة الامتحانات لاختصاص جراحة الأطفال:

اجتمعت لجنة الامتحانات لاختصاص جراحة الأطفال خلال الفترة 10-2010/4/12 لوضع أسئلة الامتحان النهائي الكتابي لاختصاص جراحة الأطفال لدورة تشرين الثاني/2010.

3- اجتماع الدورة الأولى للمجلس العلمي لاختصاص جراحة العظام:

اجتمعت الدورة الأولى للمجلس العلمي لاختصاص جراحة العظام في دمشق بتاريخ 2010/4/18.

4- اجتماع لجنة دراسة وتحديث دليل التدريب والامتحانات لاختصاص الجراحة البولية:

اجتمعت لجنة دراسة وتحديث دليل التدريب والامتحانات لاختصاص الجراحة البولية في دمشق خلال الفترة 23-2010/4/24.

5- الامتحان السريري والشفوي لاختصاص الجراحة العامة:

عقد الامتحان السريري والشفوي لاختصاص الجراحة العامة يومي 1-2010/5/2 في مركز دمشق. وقد تقدم لهذا الامتحان 49 طبيباً، نجح منهم 17 طبيباً، أي أن نسبة النجاح هي 35%.

6- اجتماع لجنة الامتحانات لاختصاص الجراحة العامة:

اجتمعت لجنة الامتحانات لاختصاص الجراحة العامة خلال الفترة 3-2010/5/5 لوضع أسئلة الامتحان الأولي لاختصاص الجراحة العامة لدورة حزيران/2010.

7- الامتحان السريري والشفوي لاختصاص الجراحة العامة:

عقد الامتحان السريري والشفوي لاختصاص الجراحة العامة في مركز صنعاء يومي 15-2010/5/16. وقد تقدم لهذا الامتحان 20 طبيباً، نجح منهم 7 اطباء، أي أن نسبة النجاح هي 35%.

8- اجتماع لجنة دراسة وتحديث دليل التدريب والامتحانات لاختصاص جراحة الأطفال:

اجتمعت لجنة دراسة وتحديث دليل التدريب والامتحاناتت لاختصاص جراحة الأطفال في دمشق خلال الفترة 23-2010/5/24.

9- الامتحان الأولي لاختصاص الجراحة العامة:

عقد الامتحان الأولي لاختصاص الجراحة العامة بتاريخ 2010/6/6 في المراكز الامتحانية التالية: طرابلس، والرياض، وبغداد، والخرطوم، والقاهرة، والدوحة، وبنغازي، وصنعاء، واربد، والعين، ودمشق. وقد تقدم لهذا الامتحان 283 طبيباً، نجح منهم 145 طبيباً، أي أن نسبة النجاح هي 51%. وفيما يلي نسب النجاح حسب المراكز الامتحانية التالية:

اسم المركز	عدد المتقدمين	عدد الناجحين	%
الخرطوم	15	6	%40
الدوحة	13	7	%53
الرياض	25	20	%80
العين	11	7	%64
القاهرة	7	2	%29
اربد	50	28	%56
بغداد	49	32	%65
بنغازي	11	2	%18
دمشق	53	11	%21
صنعاء	39	27	%69
طرابلس	10	3	%30
المجموع	283	145	%51

10- اجتماع لجنة دراسة وتحديث دليل التدريب والامتحانات لاختصاص الجراحة العصبية:

اجتمعت لجنة دراسة وتحديث دليل التدريب والامتحانات لاختصاص الجراحة العصبية في دمشق خلال الفترة 27-2010/6/28.

اختصاص النسائية والتوليد

1- الامتحان الأولي لاختصاص النسائية والتوليد:

عقد الامتحان الأولي لاختصاص النسائية والتوليد بتاريخ 2010/4/4 في كل من المراكز التالية: الرياض، ودمشق، وجدة، والدوحة، وطرابلس، وبنغازي، وصنعاء، وعمان. حيث تقدم لهذا الامتحان 164 طبيباً، نجح منهم 84 طبيباً، أي أن نسبة النجاح هي 51%. وفيما يلي نسب النجاح حسب المراكز الامتحانية التالية:

اسم المركز	عدد المتقدمين	عدد الناجحين	%
الرياض	22	16	%72
دمشق	29	21	%72
جدة	16	6	%37
الدوحة	24	13	%54
طرابلس	44	13	%29
بنغازي	7	1	%14
صنعاء	5	2	%40
عمان	17	12	%70
المجموع	164	84	%51

2- الامتحان السريري لاختصاص النسائية والتوليد:

جرى الامتحان السريري لاختصاص النسائية والتوليد في مركز صنعاء بتاريخ 15-2010/5/16. وقد تقدم لهذا الامتحان 27 طبيباً، نجح منهم 14 طبيباً، أي أن نسبة النجاح هي 52%.

3- امتحان الأوسكي لاختصاص النسائية والتوليد:

جرى امتحان الأوسكي لاختصاص النسائية والتوليد في مركز طرابلس- الجماهيرية العربية الليبية بتاريخ 11-2010/4/12. وقد تقدم لهذا الامتحان 34 طبيباً، نجح منهم 22 طبيباً، أي أن نسبة النجاح هي 64%.

اختصاص طب الأطفال

- اجتماع لجنة الامتحانات لاختصاص طب الأطفال:

اجتمعت لجنة الامتحانات لاختصاص طب الأطفال بتاريخ 19-2010/6/21.

اختصاص الأمراض الجلدية والتناسلية

1- الامتحان الأولي لاختصاص الأمراض الجلدية والتناسلية:

عقد الامتحان الأولي لاختصاص الأمراض الجلدية والتناسلية بتاريخ 2010/4/24 في مركز دمشق. وقد تقدم لهذا الامتحان 37 طبيباً، نجح منهم 25 طبيباً، أي أن نسبة النجاح هي 67%.

2- الامتحان السريري والشفوي لاختصاص الأمراض الجلدية والتناسلية:

عقد الامتحان السريري والشفوي لاختصاص الأمراض الجلدية والتناسلية بتاريخ 2010/4/25 في مركز دمشق- الجمهورية العربية السورية. وقد تقدم لهذا الامتحان 11 طبيباً، نجح منهم 7 أطباء، أي أن نسبة النجاح هي 63%.

خريجو المجلس العربي للاختصاصات الصحية
خلال الفترة من 2010/4/1 لغاية 2010/6/30

اختصاص الجراحة العامة

اسم الطبيب	مركز التدريب
ضياء أتيلا علي صالح حجازي	م.م. فيصل التخصصي–الرياض
هاني محمد نورين أحمد الأهدل	م.م. فيصل التخصصي–الرياض
عارف اسماعيل قايض الرويلي	م. فهد للحرس الوطني– الرياض
رؤى عبد الله علي عطية	م. خالد للحرس الوطني– جدة
عماد محمد أسعد مصطفى	م. الأردن– عمان
همام فايز علي المومني	م. المؤسس عبد الله– اربد
فلاح حسن مشالي	ج. الفاتح العظيم– طرابلس
مردوخ سامي عبد علي	مدينة الطب– بغداد
علي داود عبد الوهاب	م. البصرة التعليمي– البصرة
صالح عبد الكافي عويد العاني	دائرة اليرموك الطبية– بغداد
حسنين طالب عيسى	دائرة اليرموك الطبية– بغداد
لؤي فرحان زغير	دائرة اليرموك الطبية– بغداد
ذو الفقار حسن علي	دائرة اليرموك الطبية– بغداد
قاسم حمزة عريبي الفريشي	دائرة اليرموك الطبية– بغداد
ناريان أحمد محمد	م. حمد العام– الدوحة
محمود محمد علي عجوب	م. المواساة الجامعي– دمشق
عصام محمد خليل	م. المواساة الجامعي– دمشق
عبد الرحمن ناصر العمراني	م. الثورة النموذجي– صنعاء
ياسر عبد ربه ثابت عبيديل	م. الثورة النموذجي– صنعاء
خالد محسن أبو بكر حسين	م. الثورة النموذجي– صنعاء
عبد الفتاح أحمد مثنى الحالمي	م. الثورة النموذجي– صنعاء
نائلة محمد علي جباري	م. الثورة النموذجي– صنعاء
شوقي حسين قائد الحائطي	م. الثورة النموذجي– صنعاء
علي عبد الله محمد حيدان	م. الجمهوري التعليمي– عدن

اختصاص جراحة الأطفال

اسم الطبيب	مركز التدريب
محمد مهند حسن البطل	م. حلب الجامعي– حلب
صافي سالم نعسان الحاج علي	م. حلب الجامعي– حلب
أحمد خالد العليوي	م. حلب الجامعي– حلب
حسان عدنان سحتوت	م. حلب الجامعي– حلب

اختصاص الأمراض الباطنة

اسم الطبيب	مركز التدريب
أتلانتيك ديسوزا	م. حمد الطبية– الدوحة
أحمد عبد الله علي إلياس	م. حمد الطبية– الدوحة
أحمد محمود أحمد محمود هاشم	م. حمد الطبية– الدوحة
سعيد بن جودت سعيد شعت	م. حمد الطبية– الدوحة
عبد الرزاق عبد الرحمن بويل	م. حمد الطبية– الدوحة
عبد الله علي عبد الله المراغي	م. حمد الطبية– الدوحة
محسن أحمد علي شاهين	م. حمد الطبية– الدوحة
محمد خليل أحمد محسن	م. حمد الطبية– الدوحة
هاني سليمان أحمد ابراهيم الزير	م. حمد الطبية– الدوحة
يحيى زكريا بشير إمام	م. حمد الطبية– الدوحة
رزان عبد الرزاق الشقفي	م. الرياض المركزي– الرياض
مريم الطوير علي راشد الحساني	م. العين والتوام– دبي
مريم خليفة مليفي الشامسي	م. العين والتوام– دبي
آمنة سالم سيف المهيري	م. راشد– دبي
هادية محمد عزام قياس	م. راشد– دبي

خريجو المجلس العربي للاختصاصات الصحية
خلال الفترة من 2010/4/1 لغاية 2010/6/30

اختصاص أمراض القلب والأوعية

اسم الطبيب	مركز التدريب
محمود ابراهيم محمود ازريق	م. الجامعة الأردنية- عمان
محمد عبد الله مجلي مسفر	مدينة الحسين الطبية- عمان
عبد الرحمن مشعان المغيري	م. الأمير سلطان- الرياض
منتصر يوسف ابراهيم اسماعيل	م. حمد الطبية- الدوحة

اختصاص جراحة الفم والوجه والفكين

اسم الطبيب	مركز التدريب
حسان الخباز	م. المجتهد- دمشق
محمد رباح عطاري	م. المجتهد- دمشق
أنس محمود دملخي	ج. حلب- حلب
نادية السكري	م. السلمانية الطبي- البحرين

اختصاص الأمراض الجلدية والتناسلية

اسم الطبيب	مركز التدريب
أنور علي فرحان	م. الجمهوري التعليمي- صنعاء
إيناس بهجت موسى	ج. دمشق- دمشق
بشار عزيز علي ديب	م. حلب الجامعي- حلب
صلاح عبد الحسن الزبيدي	م. بغداد التعليمي- بغداد
ناصر سالم راشد العدوي	م. النهضة- مسقط
وفاء سيف سليمان الظاهري	م. المفرق- أبو ظبي
وفاء علي أحمد محمد البعداني	م. الثورة العام- اليمن

اختصاص التخدير والعناية المركزة

اسم الطبيب	مركز التدريب
محمد بدوي أبو مندور محمد	م. السلمانية الطبي- المنامة
الصادق عبد الرحمن عزت	م. الخرطوم- الخرطوم
محمد سالم يحيى الخيري	ج. العلوم والتكنولوجيا- اربد
صباح نوري طابور	مدينة الطب- بغداد
علي عبد الحميد محمد علي	مدينة الطب- بغداد
منصور سمير بيومي الشامي	م. الخرطوم- الخرطوم
سامي محجوب حسن عبد الله	م. الخرطوم- الخرطوم
سوسن صبحي حسن يخلف	م. حمد الطبية- الدوحة
ناصر أحمد البشير شيوب	م. طرابلس الطبي- طرابلس
عز الدين عبيد اللافي	م. الجلاء- بنغازي
رزان ياسين قصاب	م. المواساة- دمشق
أحمد عيسى محمد النادي	م. م. فهد الجامعي- الخبر
فراس عبد العظيم باقر الشماع	م. حمد الطبية- الدوحة
حسين جلال عيسى علي	م. الثورة- صنعاء
محمد عطاء الرحمن	م. حمد الطبية- الدوحة
طارق ناصر سليم قشوع	م. الجامعة الأردنية- عمان

اختصاص النسائية والتوليد

اسم الطبيب	مركز التدريب
أسرار صالح محمد صياد	م. الثورة- صنعاء
ألطاف عبد الحميد المقطري	م. الثورة- صنعاء
صفية محمد حسين الشرفي	م. الثورة- صنعاء
هدى صلاح عبد القوي	م. الثورة- صنعاء
افتكار سعيد فرج باضريس	م. الثورة- صنعاء

خريجو المجلس العربي للاختصاصات الصحية

خلال الفترة من 2010/4/1 لغاية 2010/6/30

اسم الطبيب	مركز التدريب
وردة علي صالح باحقوم	م. الثورة- صنعاء
وفاء علي محمد الجبلي	م. الثورة- صنعاء
رواء عبد الرحيم حسن محمد	م. السبعين- صنعاء
هدى عبود أحمد باصرة	م. الوحدة التعليمي- صنعاء
سميرة عبد الوهاب الظفيري	م. السبعين- صنعاء
وفاء عبد الله عبد الجبار القباطي	م. الثورة- صنعاء
حميدة عبد الله أحمد القطاع	م. الثورة- صنعاء
سعاد خزعل كاظم	م. الجمهوري- صنعاء
أماني عوض الغريب	م. الثورة- صنعاء
ابتسام عطية الصالحين	م. الجماهيرية- طرابلس
نادية الزروق محمد	م. الجماهيرية- طرابلس
أمل محمد ارحومة	م. الجماهيرية- طرابلس
إيناس مختار الدبر	م. طرابلس الطبي- طرابلس
سمية السائح ضواقة	م. الجلاء- طرابلس
منى خير الرابطي	م. طرابلس الطبي- طرابلس

اسم الطبيب	مركز التدريب
هدى خليفة عثمان خليف	م. الجلاء- طرابلس
كفاية عمار الرويمي	م. طرابلس الطبي- طرابلس
إيمان عبد المجيد العكاري	م. الجلاء- طرابلس
نادية عياد يزيك	م. طرابلس الطبي- طرابلس
عائشة عبد السلام حدود	م. الجلاء- طرابلس
فتح عبد الرحمن ماشيتة	م. طرابلس الطبي- طرابلس
نعمان محمد المسلاتي	م. الجلاء- طرابلس
هدى جمعة أحمد الجربي	م. الجلاء- طرابلس
هشام سليمان هلال	م. طرابلس الطبي- طرابلس
شرادة السنوسي حويو	م. طرابلس الطبي- طرابلس
امباركة علي مسعود صياح	م. طرابلس الطبي- طرابلس
أماني صالح المنتصر	م. طرابلس الطبي- طرابلس
رحاب أحمد رمضان	م. طرابلس الطبي- طرابلس
نعمات عادل المسلاتي	م. طرابلس الطبي- طرابلس
صبرية بشير الحمريني	م. طرابلس الطبي- طرابلس