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Serum bile acids profiling by liquid chromatography-tandem mass spectrometry (LC-MS/MS) and its application on pediatric liver and intestinal diseases

تحديد مستويات الحموض الصفراوية في المصل عبر تقنية قياس الطيف الكتلي المتراكس (LC-MS/MS) 

Fu X, et al.

Background: A method for bile acid profiling measuring 21 primary and secondary bile acids in serum samples was developed and validated with liquid chromatography-tandem mass spectrometry (LC-MS/MS). Sample preparation included spiking with internal standards followed by protein precipitation, centrifugation, drying under nitrogen gas and reconstitution. Extracted samples were injected onto a Phenomenex Kinetex C18 column (150 × 4.60 mm, 2.6 μm).

Methods: Data was collected with LC-MS/MS G in negative ion mode with multiple reaction monitoring (MRM) and single reaction monitoring (SRM). The analytical run time was 12 min.

Results: The method showed excellent linearity with high regression coefficients (>0.99) over a range of 0.05 and 25 μM for all analytes tested. The method also showed acceptable intra-day and inter-day accuracy and precision. As a proof of concept, the analytical method was applied to patients with neonatal intrahepatic cholestasis caused by citrin deficiency (NICCD), biliary atresia (BA), and necrotizing enterocolitis (NEC), and distinct bile acids profiles were demonstrated.

Conclusions: The method could be poised to identify possible biomarkers for non-invasive early diagnosis of these disorders.
Stratifying asthma severity in children using cough sound analytic technology
تحديد شدة الربو عند الأطفال من خلال تقنية تحليل أصوات السعال

Swarnkar V, et al.

Introduction: Asthma is a common childhood respiratory disorder characterized by wheeze, cough and respiratory distress responsive to bronchodilator therapy. Asthma severity can be determined by subjective, manual scoring systems such as the Pulmonary Score. These systems require significant medical training and expertise to rate clinical findings such as wheeze characteristics, and work of breathing. In this study, we report the development of an objective method of assessing acute asthma severity based on the automated analysis of cough sounds.

Methods: We collected a cough sound dataset from 224 children; 103 without acute asthma and 121 with acute asthma. Using this database coupled with clinical diagnoses and Pulmonary Scores (PS) determined by a clinical panel, we developed a machine classifier algorithm to characterize the severity of airway constriction. The performance of our algorithm was then evaluated against the PS from a separate set of patients, independent of the training set.

Results: The cough-only model discriminated no/mild disease (PS 0-1) from severe disease (PS 5,6) but required a modified respiratory rate calculation to separate very severe disease (PS >6). Asymptomatic children (PS 0) were separated from moderate asthma (PS 2-4) by the cough-only model without the need for clinical inputs.

Mini-doses of glucagon to prevent hypoglycemia in children with type 1 diabetes refusing food
إعطاء جرعات منخفضة من الغلوكاغون للوقاية من نقص سكر الدم عند الأطفال مرضى النمط الأول من الداء المكرر الرافضين للطعام

Tinti D, et al.

Aims: Hypoglycemia in small children with type 1 diabetes is difficult to manage if nausea, vomit or food refusal occurs. If oral carbohydrate cannot be used, there is a hypothetical risk of severe hypoglycemia. The present article describes the effect on glucose of small doses of subcutaneous glucagon to revert hypoglycemia and prevent severe events in small children with type 1 diabetes using a continuous glucose monitoring.

Methods: We analyzed 4 episodes of impending or mild hypoglycemia in 3 children with type 1 diabetes who refused to eat carbohydrates. Using a standard U-100 insulin syringe, children received one «unit» (10 μg) of glucagon.
subcutaneously for every year of age up to 15 units (150 μg). If the blood glucose did not increase within 30 min, the initial dosage was repeated at that time. Instructions were given by phone from the physician. At the following visit data from continuous glucose monitoring devices, insulin pump and glucometer were downloaded and reviewed retrospectively from the physician.

**Results:** Blood glucose from continuous glucose monitoring after one and 2 h was 127±80 mg/dl and 165±78 mg/dl, respectively. After a glucagon injection, there was a single recurrence of hypoglycemia, requiring another shot. The glucagon was well tolerated, except for nausea, present before the injection. None of the children were taken to our hospital because of concerns for hypoglycemia.

**Conclusion:** Mini-doses of glucagon given subcutaneously were effective and safe in preventing frank or impending hypoglycemia in type 1 diabetes children refusing food.

The utility of echocardiography in pediatric patients with structurally normal hearts and suspected endocarditis

**Objectives:**

The objective of this study was to evaluate the utility of transthoracic echocardiography (TTE) in children with structurally normal hearts suspected of having infective endocarditis (IE). We hypothesized that the diagnostic yield of TTE is minimal in low-risk patients with normal hearts. We performed a retrospective chart review of TTES performed for concern for endocarditis at a pediatric tertiary care referral center in Portland, Oregon. Three hundred patients met inclusion criteria (<21 years old, completed TTE for IE from 2005 to 2015, no history of congenital heart disease or endocarditis). We recorded findings that met the modified Duke criteria (MDC) including fever, positive blood culture, and vascular/immunologic findings; presence of a central line; whether or not patients were diagnosed with IE clinically; and if any changes to antibiotic regimens were made based on TTE. Ten patients (3%) had echocardiograms consistent with IE. When compared to the clinical diagnosis of IE, the positive predictive value
(PPV) of one positive blood culture without other major/minor MDC was 0. Similarly, the PPV of two positive blood cultures without other major/minor criteria was 0.071. Patients should be evaluated using the MDC to assess the clinical probability of IE prior to performing a TTE. Patients with a low probability for IE should not undergo TTE as it has a low diagnostic yield and patients are unlikely to be diagnosed with disease.

The spectrum of acute central nervous system symptoms during the treatment of childhood acute lymphoblastic leukaemia

طيف أعراض الجهاز العصبي الباطني الحادة خلال معالجة حالات الإبيضاض اللمفاوي الحاد عند الأطفال

Banerjee J, et al.

Background: Children with central nervous system (CNS) toxicity during therapy for acute lymphoblastic leukaemia (ALL) are at risk for treatment modifications, long-term sequelae and even higher mortality. A better understanding of CNS symptoms and their complications improves the potential to prevent and treat them.

Methods: Patient files from 649 children treated with Nordic Society of Pediatric Hematology and Oncology ALL92 and ALL2000 protocols in Finland were reviewed retrospectively for any acute CNS symptom. Detailed data on symptoms, examinations and treatment of the underlying CNS complications were collected from the medical records. Disease-related and outcome data were retrieved from the Nordic leukaemia registry.

Results: Altogether, 13% (86) of patients with ALL had acute CNS symptoms. Most symptoms (64%) occurred during the first 2 months of therapy. Posterior reversible encephalopathy syndrome was the most frequent complication (4.5%). Cerebrovascular events were diagnosed in 10 cases (1.6%), while methotrexate-related stroke-like syndrome (SLS) was observed in only one patient (0.2%). CNS symptoms due to systemic or unclear conditions, especially sepsis, were important for differential diagnosis. CNS leukaemia was associated with CNS symptoms (hazard ratio [HR]=4.03; P=0.003), and epilepsy was a common sequel of CNS complications (19%).

Conclusions: Acute CNS symptoms are common during ALL therapy, occurring mainly during the first 2 months of treatment. Patients with CNS leukaemia at diagnosis are at a higher risk for CNS toxicity. Despite intensive CNS-directed methotrexate treatment, SLS was diagnosed extremely rarely in our series.
خلفية البحث: يعتبر الأطفال بحالات الإبيضاض اللمفاوي الحاد ذو خطورة لتطلب تعديلات في العلاج، أو تطوير عقبات طويلة الأقدام أو حتى وفيات متوقعة أعلى. إن الوصول لفهم أفضل لأعراض الجملة العصبية المركزية واختلاطاتها اللاحقة يحسن من القدرة على الوقاية منها وعالجتها في الوقت المناسب.

طرق البحث: تم بشكل راجع استعراض السجلات الخاصة بـ 649 طفلًا معالجين باستخدام بروتوكولات جمعية للأمثلة الدم والأورام عند الأطفال (ALL2000 و ALL92) في فنلندا، حيث تم تقييم حدوث أي من الأعراض الحادة للجملة العصبية المركزية. تم أيضًا جمع معلومات تفصيلية حول الأعراض، الفحوصات والمعالجة المرتبطة باختلاطات الجملة العصبية المركزية من السجلات الطبية للمريض. استخلصت البيانات المتعلقة بالمرض والنتائج من سجل Nordic للإيضاض.

النتائج: لوحظ بالإجمال تطور أعراض حادة في الجملة العصبية المركزية عند 13% من المرضى (86 مريضاً) من مرضى الإيضاض اللمفاوي الحاد ALL2000. حدثت غالبية الأعراض خلال الـ 6 أشهر الأولى من المعالجة، فيما كانت متلازمة اعتلال الدماغ الخلفي العكوس أكثر الاختلاطات مشاهدة (4.5%). تم تشخيص الحوادث الوعائية المخية في 10 حالات (1.6%)، بينما لوحظت المتلازمة الشبيهة بالسكتة المرتبطة بالدم- الدم– حالات هامة كتشخيص تفريقي، تفاوت الإيضاض في الجملة العصبية المركزية مع أعراض الجملة العصبية المركزية (نسبة الخطورة = 0.7). كانت أعراض الجملة العصبية المركزية الناتجة عن حالات جهازية أو حالات غير واضحة -وخاصة إنتان، 0.2%، كما كان الصفر أحد أهم العقبات اللائحة للأعراض العصبية المركزية (19%).

الاستنتاجات: تعد الأعراض الحادة في الجملة العصبية المركزية شائعة خلال معالجة حالات الإبيضاض اللمفاوي الحاد عند الأطفال، حيث تحدث بشكل رئيسي خلال الـ 6 أشهر الأولى من المعالجة. يعتبر الأطفال بحالات الإبيضاض اللمفاوي الحاد عند الأطفال، حيث تحدث بشكل رئيسي خلال الـ 6 أشهر الأولى من المعالجة. يعتبر الأطفال بحالات الإبيضاض اللمفاوي الحاد عند الأطفال، حيث تحدث بشكل رئيسي خلال الـ 6 أشهر الأولى من المعالجة. يعتبر الأطفال بحالات الإبيضاض اللمفاوي الحاد عند الأطفال، حيث تحدث بشكل رئيسي خلال الـ 6 أشهر الأولى من المعالجة. يعتبر الأطفال بحالات الإبيضاض اللمفاوي الحاد عند الأطفال، حيث تحدث بشكل رئيسي خلال الـ 6 أشهر الأولى من المعالجة. يعتبر الأطفال بحالات الإبيضاض اللمفاوي الحاد عند الأطفال، حيث تحدث بشكل رئيسي خلال الـ 6 أشهر الأولى من المعالجة. يعتبر الأطفال بحالات الإبيضاض اللمفاوي الحاد عند الأطفال، حيث تحدث بشكل رئيسي خلال الـ 6 أشهر الأولى من المعالجة. يعتبر الأطفال بحالات الإبيضاض اللمفاوي الحاد عند الأطفال، حيث تحدث بشكل رئيسي خلال الـ 6 أشهر الأولى من المعالجة. يعتبر الأطفال بحالات الإبيضاض اللمفاوي الحاد عند الأطفال، حيث تحدث بشكل رئيسي خلال الـ 6 أشهر الأولى من المعالجة. يعتبر الأطفال بحالات الإبيضاض اللمفاوي الحاد عند الأطفال، حيث تحدث بشكل رئيسي خلال الـ 6 أشهر الأولى من المعالجة. يعتبر الأطفال بحالات الإبيضاض اللمفاوي الحاد عند الأطفال، حيث تحدث بشكل رئيسي خلال الـ 6 أشهر الأولى من المعالجة. يعتبر الأطفال بحالات الإبيضاض اللمفاوي الحاد عند الأطفال، حيث تحدث بشكل رئيسي خلال الـ 6 أشهر الأولى من المعالجة. يعتبر الأطفال بحالات الإبيضاض اللمفاوي الحاد عند الأطفال، حيث تحدث بشكل رئيسي خلال الـ 6 أشهر الأولى من المعالجة. يعتبر الأطفال بحالات الإبيضاض اللمفاوي الحاد عند الأطفال، حيث تحدث بشكل رئيسي خلال الـ 6 أشهر الأولى من المعالجة. يعتبر الأطفال بحالات الإبيضاض اللمفاوي الحاد عند الأطفال، حيث تحدث بشكل رئيسي خلال الـ 6 أشهر الأولى من المعالجة. يعتبر الأطفال بحالات الإبيضاض اللمفاوي الحاد عند الأطفال، حيث تحدث بشكل رئيسي خلال الـ 6 أشهر الأولى من المعالجة. يعتبر الأطفال بحالات الإبيضاض اللمفاوي الحاد عند الأطفال، حيث تحدث بشكل رئيسي خلال الـ 6 أشهر الأولى من المعالجة. يعتبر الأطفال بحالات الإبيضاض اللمفاوي الحاد عند الأطفال، حيث تحدث بشكل رئيسي خلال الـ 6 أشهر الأولى من المعالجة. يعتبر الأطفال بحالات الإبيضاض اللمفاوي الحاد عند الأطفال، حيث تحدث بشكل رئيسي خلال الـ 6 أشهر الأولى من المعالجة. يعتبر الأطفال بحالات الإبيضاض اللمفاوي الحاد عند الأطفال، حيث تحدث بشكل رئيسي خلال الـ 6 أشهر الأولى من المعالجة. يعتبر الأطفال بحالات الإبيضاض اللمفاوي الحاد عند الأطفال، حيث تحدث بشكل رئيسي خلال الـ 6 أشهر الأولى من المعالجة. يعتبر الأطفال بحالات الإبيضاض اللمفاوي الحاد عند الأطفال، حيث تحدث بشكل رئيسي خلال الـ 6 أشهر الأولى من المعالجة. يعتبر الأطفال بحالات الإبيضاض اللمفاوي الحاد عند الأطفال، حيث تحدث بشكل رئيسي خلال الـ 6 أشهر الأولى من المعالجة. يعتبر الأطفال بحالات الإبيضاض اللمفاوي الحاد عند الأطفال، حيث تحدث بشكل رئيسي خلال الـ 6 أشهر الأولى من المعالجة. يعتبر الأطفال بحالات الإبيضاض اللمفاوي الحاد عند الأطفال، حيث تحدث بشكل رئيسي خلال الـ 6 أشهر الأولى من المعالجة. يعتبر الأطفال بحالات الإبيضاض اللمفاوي الحاد عند الأطفال، حيث تحدث بشكل رئيسي خلال الـ 6 أشهر الأولى من المعالجة. يعتبر الأطفال بحالات الإبيضاض اللمفاوي الحاد عند الأطفال، حيث تحدث بشكل رئيسي خلال الـ 6 أشهر الأولى من المعالجة. يعتبر الأطفال بحالات الإبيضاض اللمفاوي الحاد عند الأطفال، حيث تحدث بشكل رئيسي خلال الـ 6 أشهر الأولى من المعالجة. يعتبر الأطفال بحالات الإبيضاض اللمفاوي الحاد عند الأطفال، حيث تحدث بشكل رئيسي خلال الـ 6 أشهر الأولى من المعالجة. يعتبر الأطفال بحالات الإبيضاض اللمفاوي الحاد عند الأطفال، حيث تحدث بشكل رئيسي خلال الـ 6 أشهر الأولى من المعالجة. يعتبر الأطفال بحالات الإبيضاض اللمفاوي الحاد عند الأطفال، حيث تحدث بشكل رئيسي خلال الـ 6 أشهر الأولى من المعالجة. يعتبر الأطفال B...
Conclusions: CS deliveries were performed more often in women with AS. However, other maternal complications and offspring complications were similar between women with AS and healthy control subjects.

Aspirin, low molecular weight heparin, or both in preventing pregnancy complications in women with recurrent pregnancy loss and factor V Leiden mutation

Karadağ C, et al.

Objective: The aim of this study was to compare the effects of low molecular weight heparin (LMWH), LMWH plus low dose aspirin, or low dose aspirin only on pregnancy outcomes in recurrent pregnancy loss (RPL) patients with factor V Leiden mutation (FVLM).

Materials and methods: A total of 2764 RPL patients were evaluated in for the etiology of RPL. Mutations in factor V Leiden homozygous and heterozygous were determined. Subsequently, 196 of these patients were diagnosed with FVLM and included in the study; of these 174 completed the study. At the sixth week of gestation of subsequent pregnancy participants were randomly distributed into three groups. Group A (n=61) was composed of patients with an oral dose of 100 mg aspirin daily, Group B (n=59) consisted of patients using 40 mg enoxaparin and 100 mg orally aspirin daily, and Group C (n=54) included patients using 40 mg enoxaparin daily during pregnancy.

Results: Among the 174 patients who completed the study, the live birth and miscarriage rates were similar for the three groups (p=0.843 and p=0.694, respectively). There was no significant difference among the groups in rates of eclampsia, placental abruption, intrauterine fetal growth restriction and gestational diabetes mellitus. The number of preeclamptic patients was significantly higher in Group A than Groups B and C. The levels of preterm birth was significantly higher in Group A than Groups B and C.

Conclusion: Using low dose aspirin, LMWH plus aspirin, or LMWH alone yielded comparable live birth rates in
Identification of risk factors for postpartum urinary retention following vaginal deliveries

تحديد عوامل الخطورة لحدوث الاحتباس البولي بعد المخاض في حالات الولادة المهبلية


Objective: Postpartum urinary retention (PUR) is an uncommon complication of vaginal delivery, defined as a failure to void spontaneously in the six hours following vaginal birth. The objective of this study was to identify risk factors for PUR in order to provide prompt management.

Study design: A retrospective, comparative, case-control study, including two groups of 96 patients who delivered vaginally, was conducted at the Women and Children’s University Hospital in Lyon, France. Patients were selected based on data extraction from the medical records of the obstetrics and gynecology department. The first group included patients with postpartum urinary retention and the second group, without PUR, was selected randomly, respecting 1:1 matching criteria, paired according to the year of delivery and patient’s age at delivery.

Results: Logistic regression analysis found that instrumental delivery (OR 13.42, 95%CI [3.34;53.86], p=0.0002), absence of spontaneous voiding before leaving the delivery room (OR 6.14, 95%CI [2.56;14.73], p<0.0001), no intact perineum (OR 3.29, 95%CI [1.10;9.90], p=0.03) and vulvar edema or perineal hematoma (OR 8.05, 95%CI [1.59;40.67], p=0.01) were independent risk factors associated with PUR.

Conclusion: The present study identified risk factors for PUR that should be taken into consideration as soon as delivery is over in order to implement appropriate management. Future studies are needed to assess the contribution of early systematic bladder scanning in patients with risk factors for early diagnosis of PUR.
هدف البحث: يعتبر الاحتباس البولي بعد المخاض من الاختلاطات غير الشائعة بعد الولادات المهبلية، والتي تعرف بشكل حدوث التبول العفوي خلال 6 ساعات من الولادة المهبلية. تهدف هذه الدراسة إلى تحديد عوامل الخطورة لحدوث الاحتباس البولي بعد المخاض بحثاً للتنبئ.

تهدف الدراسة إلى تحديد عوامل الخطورة لحدوث الاحتباس البولي بعد المخاض بغية الوصول للتدبير المناسب للحالة.

تم إجراء دراسة مقارنة مداولة من النمط الحالات والشواهد تتضمن مجموعتين من 96 مريضة ولدّلن قبل المخاض، تم اختيار المريضات بناءً على المعطيات المستخلصة من السجلات الطبية للأقسام التوليد والنسائية في مشفى الأطفال والأمهات في مدينة ليون بفرنسا. تم اختيار المريضات بناءً على المعطيات المستخلصة من السجلات الطبية للأقسام التوليد والنسائية في مشفى الأطفال والأمهات في مدينة ليون بفرنسا.

تمت فحص المريضات في المجموعة الأولى خلال 6 ساعات من الولادة المهبلية، بينما تمتد الفحص في المريضات في المجموعة الثانية لفترة أطول.

التعرف على عوامل الخطورة لحدوث الاحتباس البولي بعد الولادة والولادة، تم اختيار عشوائياً بشكل متوازن وتم تقسيم المريضات إلى مجموعتين تضمنت توزيعًا عشوائياً بناءً على السنة من الولادة حيث سنة الولادة والعمر عند الولادة، تم تقسيم المريضات إلى مجموعتين تضمنت توزيعًا عشوائياً بناءً على السنة من الولادة حيث سنة الولادة والعمر عند الولادة.

النتائج: أظهر تحليل التقدير المنطقي أن الولادة باستخدام الأدوات (نسبة الأرجحية 13.42، بـ p=0.0002، 3.34-53.86: %95، بفواصل ثقة 95)، غياب التبول العفوي قبل الخروج من غرفة الولادة (نسبة الأرجحية 6.14، بـ p=0.0001، 14.73-2.56: %95، بفواصل ثقة 95)، تهتك العجان (نسبة الأرجحية 3.29، بـ p=0.03، 9.90-1.10: %95، بفواصل ثقة 95) شكلت عوامل خطورة تترافق مع الاحتباس البولي بعد الولادة.

استنتاجات: أظهرت هذه الدراسة عوامل الخطورة لحدوث الاحتباس البولي بعد مخاض المريضات، والتي يجب أن تتم التعرف عليها عند انتهاء المخاض للقيام بالتدبير المناسب. يجب إجراء المزيد من الدراسات مستقبلاً لتقييم دور إجراء المسح المثاني الجهازي الباكر عند مريضات عوامل الخطورة في التشخيص المبكر لاحتباس البولي بعد المخاض.

Cranberry, D-mannose and anti-inflammatory agents prevent lower urinary tract symptoms in women undergoing prolapse surgery

Durant la chirurgie de reconstruction du prolapsus, la prévention des symptômes urinaires inférieurs par le cranberry, D-mannose et des agents anti-inflammatoires est utilisée.

Russo E, et al.
Climacteric 2019 Nov 1:1-5.

Objective: We assessed the effect on lower urinary tract symptoms (LUTS) of a supplement containing cranberry, D-mannose and anti-inflammatory molecules in postmenopausal women undergoing surgery for cystocele.

Study design: Forty postmenopausal women were randomized 1:1 to an active group receiving the nutritional supplement twice a day for 2 weeks starting from surgery, or to a control group receiving surgery only. Primary outcomes were the effectiveness in the postoperative LUTS and urinary tract infections (UTI). LUTS were investigated by a validated questionnaire (ICIQ-FLUTS) at baseline and at week 4. Secondary outcomes were the safety and tolerability of the supplement and other perioperative outcomes.

Results: No significant differences were found in perioperative outcomes and in incidence of UTI. After surgery, women treated with the supplement experienced significantly better scores on the filling domain of the questionnaire. A non-significant decrease in voiding scores was also found. No adverse events were detected.

Conclusion: The use of an oral supplement containing cranberry, D-mannose and anti-inflammatory molecules decreases the perception of LUTS in postmenopausal women after anterior colporraphy. Our data suggest that perioperative use of nutritional supplements may be useful in the management of postoperative LUTS.
المؤلفة: تهدف هذه الدراسة إلى تقدير عوامل الخطيرة للحالة ما قبل الإرجاج في الزجاج، وعوامل الخطيرة المحتملة المسؤولة عن هذا الترافق.

الطريق البحث: ضمت هذه الدراسة الإحصائية الواجهة 114485 من النساء الحوامل اللواتي ولدن في مشفى Nanjing من النساء الحوامل اللواتي ولدن في مشفى Nanjing من النساء الحوامل اللواتي ولدن في مشفى Nanjing من النساء الحوامل اللواتي ولدن في مشفى Nanjing من النساء الحوامل اللواتي ولدن في مشفى Nanjing من النساء الحوامل اللواتي ولدن في مشفى Nanjing من النساء الحوامل اللواتي ولدن في مشفى Nanjing من النساء الحوامل اللواتي ولدن في مشفى Nanjing من النساء الحوامل اللواتي ولدن في مشفى Nanjing من النساء الحوامل اللواتي ولدن في مشفى Nanjing من النساء الحوامل اللواتي ولدن في مشفى Nanjing من النساء الحوامل اللواتي ولدن في مشفى Nanjing من النساء الحوامل اللواتي ولدن في مشفى Nanjing من النساء الحوامل اللواتي ولدن في مشفى Nanjing من النساء الحوامل اللواتي ولدن في مشفى Nanjing من النساء الحوامل اللواتي ولدن في مشفى Nanjing من النساء الحوامل اللواتي ولدن في مشفى Nanjing من النساء الحوامل اللواتي ولدن في مشفى Nanjing من النساء الحوامل اللواتي ولدن في مشفى Nanjing من النساء الحوامل اللواتي ولدن في مشفى Nanjing من النساء الحوامل اللواتي ولدن في مشفى Nanjing من النساء الحوامل اللواتي ولدن في مشفى Nanjing من النساء الحوامل اللواتي ولدن في مشفى Nanjing من النساء الحوامل اللواتي ولدن في مشفى Nanjing من sexe. من بينهن 4601 بنسبة 4% حملن عبر التخصيب في الزجاج (مجموعة IVF) و109884 (96%) حملن بشكل عفوي (المجموعة SC). تم تطبيق التكبير المنطقية لتقسيم خطر ما قبل الإرجاج بعد التخصيب في الزجاج بالمقارنة مع حالات الحمل العفوي. تم بعد ذلك استخدام تحليلات نمطية لمقارنة الخصائص السريرية ونتائج الحمل بين مجموعات مريضات IVF اللواتي طورن حالة ما قبل الإرجاج واللوتاني. تم بعد ذلك استخدام تحليلات نمطية لمقارنة الخصائص السريرية ونتائج الحمل بين مجموعات مريضات IVF اللواتي طورن حالة ما قبل الإرجاج واللوتاني.

النتائج: وجدنا في حالة ما قبل الإرجاج لدى عينة الدراسة الكلية، مع وجود حدوث أعلى وشكله لحالة ما قبل الإرجاج لدى مجموعة IVF بالمقارنة مع مجموعة الحمل العفوي (6.1% مقابل 1.0%, p>0.01). كانت الحالات الشديدة من ما قبل الإرجاج أكثر تواتراً في مجموعة حالتين IVF.
الحمل المفرد إثر التخصيب في الزجاج بالمقارنة مع مجموعة الحالات ذات الحمل المفرد إثر الحمل العفوي (40% مقابل 24.1% %، كان حدوث التشيمة المتصلة أكثر شيوعاً في مجموعة مريضات ما قبل الإرجاج ذوات الحمل المفرد إثر التخصيب في الزجاج بالمقارنة بالحمل العفوي (12.5% مقابل 2.6% %، كان نقص الأكسجة المشيمية أكثر تواتراً لدى مجموعه المصابات (p=0.003) اير التخصيب في الزجاج بالمقارنة مع حالات عدد وجود ما قبل الإرجاج (6% مقابل 12.2% %، علاوةً على ذلك فقد أظهرت مجموعة مريضات ما قبل الإرجاج إثر التخصيب في الزجاج (IVF-PE) توارداً أعلى للنزف خلال الشهر الأول للحمل (31.6% مقابل 10.5% %، (p=0.024).


Surgery

Safety and efficacy of a novel shunt surgery combined with foam sclerotherapy of varices for prehepatic portal hypertension

سلامة وفعالية جراحة التحويلة بالتشابك مع تصليب الدوالي الرغوي

في حالات ارتفاع ضغط الوريد البال قبل الكبد

Zhang Z, et al.
Clinics (Sao Paulo) 2019;74:e704.

Objectives: This pilot study investigated the safety and efficacy of a novel shunt surgery combined with foam sclerotherapy of varices in patients with prehepatic portal hypertension.

Methods: Twenty-seven patients who were diagnosed with prehepatic portal hypertension and underwent shunt surgeries were divided into three groups by surgery type: shunt surgery alone (Group A), shunt surgery and devascularization (Group B), and shunt surgery combined with foam sclerotherapy (Group C). Between-group differences in operation time, intraoperative blood loss, portal pressure decrease, postoperative complications, rebleeding rates, encephalopathy, mortality rates and remission of gastroesophageal varices were compared.

Results: Groups A, B and C had similar operation times, intraoperative bleeding, and portal pressure decrease. The remission rates of varices differed significantly (p

Conclusions: Shunt surgery combined with foam sclerotherapy obliterates varices more effectively than shunt surgery alone does, decreasing the risk of postoperative rebleeding from residual gastroesophageal varices. This novel surgery is safe and effective with good short-term outcomes.
Effect of the closure of mesenteric defects in laparoscopic Roux-en-Y gastric bypass

Samur JS, et al.

Background: Internal hernias (IH) are a recognized problem in laparoscopic Roux-en-Y gastric bypass (LRYGB) that can cause intestinal obstruction. The routine closure of the mesenteric defects (MDs) to prevent IH in the LRYGB remains controversial.

Objectives: The main objective of our study was to evaluate the risk of reopening at the level of both MDs, the Petersen space, and the intermesenteric gap.

Setting: University hospital.

Methods: Prospective cohort of patients with a history of LRYGB, all with closure of both MDs, and in whom another intra-abdominal surgery was performed after the LRYGB, between January 2013 and December 2018. The status of both MDs was recorded. All analyses were performed with Stata version 15 software with a level of significance of .05.

Results: A total of 76 patients were included. The average time that elapsed between the LRYGB and the surgery that evaluated the state of the MDs was 22.8 months. The patients lost on average 34.7 kg, with a minimum of 8 kg and a maximum of 76 kg. The indications for the interventions were cholelithiasis (68.3%), recurrent abdominal pain (13.2%), intestinal obstruction (11.8%), malabsorption syndrome (7.3%), and bilateral inguinal hernia (2.4%). At the time of surgery, 52 patients (68.4%) had a completely closed Petersen space; 58 patients (76.3%) had a completely closed intermesenteric defect. Both MDs were closed in 36 patients (47.4%), and 33 patients (43.4%) had at least 1 of the MDs open.

Conclusion: The closure of MDs eliminated the risk of IH in half of the operated patients of LRYGB in this series.

Petersen
المتوقّعات: شملت الدراسة 76 مريضاً. بلغ متوسط الزمن الفاصل بين إجراء عملية المجازة المعدية من الشكل Y بالتنظير والجراحة التالية التي تم فيها تقييم الشذوذات المساريقية 22.8 شهراً. فقد المرضى 34.7 كغ من الوزن وسطياً، بعد أدنى 8 كغ وحداً أعلى 76 كغ. شملت استطبابات التداخل الجراحي 68.4% (الانقسام الطبي الباطني 11.8%)، مئاتة الامتصاص (3.7%)، والتقسيم الباطني (2.4%). لوحظ في زمن الجراحة التالية أن 52 مريضاً (نسبة 76.3%) حققوا انغلاقاً تاماً في فراخ (نسبة 34.7%))، 22.8 شهراً. فقد المرضى الشذوذات المساريقية 7.3% (متلازمة سوء الامتصاص 11.8% (13.2%)، انسداد الأمعاء 13.2% (نسبة 68.4%))، بينما لوحظ انغلاق في كلا الشذوذين في المسايرة عند 68.3% (نسبة 34.7%)).

الاستنتاجات: تقلل عملية إغلاق الشذوذات المساريقية من حدوث الفتوق الداخلية عند نصف المرضى الخاضعين لعملية المجازة المعدية من الشكل Y بالتنظير.

Thyroidectomy as treatment of choice for differentiated thyroid cancer

استئصال الدرق كعلاج أفضل في حالات سرطان الدرق المتمايز

Giuffrida D, et al.

Background: Despite a large amount of data, the optimal surgical management of differentiated thyroid cancer remains controversial. Current guidelines recommend total thyroidectomy if primary thyroid cancer is <4 cm, while for tumors that are between 1 and 4 cm in size, either a bilateral or a unilateral thyroidectomy may be appropriate as surgical treatment. In general, total thyroidectomy would seem to be preferable because subtotal resection can be correlated with a higher risk of local recurrences and cervical lymph node metastases; on the other hand, total thyroidectomy is associated with more complications.

Methods: This is a retrospective study conducted on 359 patients with differentiated thyroid cancer, subjected to total thyroidectomy. Our aim was to correlate clinical and pathological features (extrathyroid tumor growth, bilateral, nodal and distant metastasis) with patient (gender and age) and tumor (size and histotype) characteristics. Moreover, we recorded postoperative complications, including hypoparathyroidism and laryngeal nerve damage.

Results: In our study, we found a high occurrence of pathological features indicating cancer aggressiveness (bilateral, nodal metastases, and extrathyroid invasion). On the other hand, total thyroidectomy was associated with relatively low postsurgical complication rates.

Conclusions: Our data support the view that total thyroidectomy remains the first choice for the routine treatment of differentiated thyroid cancer.

خلفية البحث: على الرغم من المعطيات الكبيرة المتوافقة، يبقى التدبير الجراحي الأمثل في حالات سرطان الدرق المتمايز من الأمور المثيرة للجدل. توجه التوصيات الحالية المعمدة لإجراء استئصال الدرق التام عندما يكون حجم سرطان الدرق <4 سم، أما في حالات الأورام بين 1-4 سم فقد يكون إجراء استئصال الدرق أحادي الجانب أو ثنائي الجانب مناسب، خيار جراحي. عموماً يبدو أن استئصال الدرق التام هو المقاربة المفضلة في هذه الحالات، وذلك لارتفاع الاستئصال تحت التام مع خطرة عالية للتكسر الموضعي وانتشار العقد اللمفاوية الرقبية، من جهة أخرى، يتفق الاستئصال التام مع اختلاطات أكبر.

الطريقة البحث: تم في هذه الدراسة الراجعة المجراة على 359 مريضاً بحالات سرطان درق متمايز خضعوا لاستئصال درق تام. كان الهدف من الدراسة ربط المظاهر السريرية والتشريحية المرضية (نحو مريخ إخلاء الدرق، حالة ثنائية الجانب، ووجود نفايات للعقد الموضعية أو نفايات بعيدة) مع خصائص المريض (الجنس والعمر) وحالة الورم (حجم الورم والنمط السريري). علاوةً على ذلك فقد تم تسجيل الاختلاطات الملاحطة بعد الجراحة ومن ضمنها قصور الغدد جارات الدرق وأذيات أصابع الحجرة.

النتائج: لوحظ في هذه الدراسة حدوث عالٍ للمظاهر التشريحية المرضية التي تشير لعدوانية الورم (الحالة ثنائية الجانب، النفايات للعقد الموضعية والاختلاطات خارج الدرق). من جهة أخرى، فقد ترافق استئصال درق التام مع معدلات الاختلاطات منخفضة نسبياً بعد الجراحة.

الاستنتاجات: تشير معطيات هذه الدراسة إلى أن استئصال الدرق التام يبقى الخيار الأفضل في المعالجة الروتينية لحالات سرطان الدرق المتمايز.
Prediction of and surgical strategy for adherent hilar lymph nodes in thoracoscopic surgery

التنبؤ بالعقد اللمفاوية السرية الملتصقة خلال الجراحة الصدرية التنظيرية والطرق الجراحية المستخدمة لتدبيرها

Matsuura Y, et al.

Introduction: Adhesions between the hilar lymph nodes (HLN) and pulmonary artery are challenging during thoracoscopic surgery. Preoperative assessment of appropriate surgical access and feasibility of thoracoscopic surgery for lobectomy are crucial. However, there have been only a few reports of this issue. We investigated the association between the radiological features and the presence of HLN adhesions and validated the possibility of preoperatively predicting their presence. The types of adhesions were classified, and surgical strategies for each category were summarized.

Methods: We retrospectively identified 19 patients with adherent HLN (group A) from 1134 patients who had undergone thoracoscopic surgery for lobectomy between January 2008 and December 2017. One case in group A was matched to two cases with normal HLN (group N) by propensity score matching. We compared the radiological features of HLN between the two groups on preoperative CT scans. For group A, we assessed the recurrence of regional lymph nodes (RLNs) and classified the types of adhesions.

Results: Adherent HLN were larger and had higher CT values than normal HLN. Calcification in the RLNs indicated the possibility of adhesions in HLN. Group A had adhesions due to inflammation but no postoperative recurrence of RLNs.

Conclusions: Adhesion of HLN to the pulmonary artery may be predicted to some extent by using preoperative CT scans. Our findings may contribute to improving the safety of thoracoscopic surgery.
In the clinical setting, administration of high daily or bolus doses of vitamin D is often solely based on 25-hydroxyvitamin D \([25(OH)D]\) testing. This review summarizes the evidence of the effect of vitamin D on cardiovascular disease (CVD). Meta-analyses of randomized controlled trials (RCTs) have demonstrated that CVD risk markers, such as lipid parameters, inflammation markers, blood pressure, and arterial stiffness, are largely unaffected by vitamin D supplementation. Similar results have been obtained regarding CVD events and mortality from (meta)-analyses of RCTs, even in subgroups with 25(OH)D concentrations >50 nmol/l. Likewise, Mendelian randomization studies have indicated that the genetic reduction of the 25(OH)D concentration does not increase CVD risk. Some studies do not exclude the possibility of adverse vitamin D effects, such as elevated plasma calcium concentration and an increased CVD risk at a 25(OH)D concentration >125 nmol/l. Based on a conservative benefit-risk management approach, vitamin D doses beyond the nutritionally recommended amounts of 600 to 800 IE daily currently cannot be advised for the prevention of CVD events.

Secondary prevention medications after coronary artery bypass grafting and long-term survival

Aims: To evaluate the long-term use of secondary prevention medications [statins, \(\beta\)-blockers, renin-angiotensin-aldosterone system (RAAS) inhibitors, and platelet inhibitors] after coronary artery bypass grafting (CABG) and the association between medication use and mortality.

Methods and results: All patients who underwent isolated CABG in Sweden from 2006 to 2015 and survived at least 6 months after discharge were included (n=28 812). Individual patient data from SWEDEHEART and other
mandatory nationwide registries were merged. Multivariable Cox regression models using time-updated data on dispensed prescriptions were used to assess associations between medication use and long-term mortality. Statins were dispensed to 93.9% of the patients 6 months after discharge and to 77.3% 8 years later. Corresponding figures for β-blockers were 91.0% and 76.4%, for RAAS inhibitors 72.9% and 65.9%, and for platelet inhibitors 93.0% and 79.8%. All medications were dispensed less often to patients ≥75 years. Treatment with statins (hazard ratio (HR) 0.56, 95% confidence interval (95% CI) 0.52-0.60), RAAS inhibitors (HR 0.78, 95% CI 0.73-0.84), and platelet inhibitors (HR 0.74, 95% CI 0.69-0.81) were individually associated with lower mortality risk after adjustment for age, gender, comorbidities, and use of other secondary preventive drugs (all P<0.001). There was no association between β-blockers and mortality risk (HR 0.97, 95% CI 0.90-1.06; P=0.54).

Conclusion: The use of secondary prevention medications after CABG was high early after surgery but decreased significantly over time. The results of this observational study, with inherent risk of selection bias, suggest that treatment with statins, RAAS inhibitors, and platelet inhibitors is essential after CABG whereas the routine use of β-blockers may be questioned.

Pulmonary Diseases

Allergen immunotherapy in allergic asthma

المعالجة المناعية بالمؤرجات في حالات الربو التحسسي

Novakova P, et al.

Background: Allergic asthma is the predominant phenotype in clinical practice. Allergen immunotherapy is the only curative and specific approach for the treatment of allergies with clinical benefits for several years after its discontinuation. Despite advances, the use of allergen immunotherapy in allergic asthma is still suboptimal and controversial. The purpose of this article is to review the published data about the impact of allergen immunotherapy...
with the most commonly used allergen extracts on allergic asthma outcomes, including both clinical parameters and patients’ subjective experience (quality of life).

**Data sources:** Several databases were used, including PubMed, Scopus, Web of Science (2002 - 2019) and search in English and Spanish languages was performed using the following terms: “allergen immunotherapy” and “asthma” in combination with “house dust mite”, “birch pollen”, “grass pollen”, “olive tree pollen”, “molds”, “pets” and “asthma quality of life”.

**Study selections:** Randomized control trials and meta-analysis from reviewed publications were included.

**Results:** Emerging data relating to the positive impact on asthma outcomes of allergen immunotherapy allows the addition of this treatment as a therapeutic option in mild to moderate asthmatics sensitized to house dust mite and pollens. Limited data are available for patients sensitized to molds and pets, as well in severe allergic asthma population.

**Conclusion:** Allergen immunotherapy remains a potential therapeutic option for some patients with allergic asthma. Further research is needed to define the optimal period of treatment, the possible therapeutic role in the treatment of severe allergic asthma, and the cost-effectiveness of allergen immunotherapy in asthmatic patients.

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**Gastroenterology**

الأمراض الهضمية

An observational study on long-term renal outcome in patients with chronic hepatitis B treated with tenofovir disoproxil fumarate

**B**

دراسة مراقبة حول النتائج الكلوية بعيدة الأمد عند مرضى التهاب الكبد الفيروسي

**tenofovir disoproxil fumarate**

المزمن المعالجين بدواء


In patients with chronic hepatitis B (CHB), long-term effects of tenofovir disoproxil fumarate (TDF) on renal function have been controversial. This study aimed to analyze the real-world long-term effects of TDF on renal function in...
Korean patients with CHB. We analyzed a cohort of 640 treatment-naïve patients with CHB who were treated with TDF between May 2012 and December 2015 at Severance Hospital, Seoul, Republic of Korea. The mean age was 48.3 years old, and 59.5% were male. The proportions of hypertension and diabetes mellitus (DM) were 11.6% and 14.2%, respectively, and that of liver cirrhosis was 20.8%. During the 5 year follow up, using a linear mixed model, serum creatinine increased from 0.77±0.01 mg/dL to 0.85±0.02 mg/dL (P < 0.001), and eGFR decreased from 102.6±0.6 mL/min/1.73m² to 93.4±1.4 mL/min/1.73m² (P < 0.001). In subgroup analysis, eGFR was statistically more decreased in patients with age >60 than ≤60 years old (P=0.027), and in patients with diuretic use than without diuretic use (P=0.008). In multivariate analysis, the independent risk factors for eGFR decrease >20% were baseline eGFR >60 mL/min/1.73m² and the use of diuretics (P < 0.001). CHB patients on TDF experienced greater reduction in renal function with age >60 and with diuretic use compared to those without these characteristics. Baseline eGFR >60 mL/min/1.73m² and use of diuretics were independent risk factors of eGFR decline of more than 20% on TDF therapy.

Diagnostic accuracy of non-invasive methods detecting clinically significant portal hypertension in liver cirrhosis

Rana R, et al.

Introduction: We attempted to investigate non-invasive techniques and their diagnostic performances for evaluating clinically significant portal hypertension.

Evidence acquisition: The systematic search was performed on PubMed, Embase, Scopus, and Web of Science™ core index databases before 13 December 2018 restricted to English language and human studies.

Evidence synthesis: 32 studies were included, with total populations of 3,987. The overall pooled analysis was performed by bivariate random effect model, which revealed significantly higher sensitivity and specificity of 77.1% (95% confidence interval, 76.8-78.5%) and 80.1% (95% confidence interval, 78.2-81.9%), respectively; positive
likelihood ratio (3.67), negative likelihood ratio (0.26); and diagnostic odd ratio (16.24). Additionally, the area under curve exhibited significant diagnostic accuracy of 0.871. However, notable heterogeneity existed in between studies ($I^2=87.1\%$), therefore, further subgroup analysis was performed. It demonstrated ultrasonography, elastography, biomarker, and computed tomography scan had a significant overall summary sensitivity (specificity) of 89.6\% (78.9\%), 81.7\% (83.2\%), 72.2\% (76.8\%), and 77.2\% (81.2\%), respectively. Moreover, the areas under curve values were significantly higher in elastography (0.906), followed by computed tomography scan (0.847), biomarker (0.825), and ultrasonography (0.803).

**Conclusions:** In future, non-invasive techniques could be the future choice of investigations for screening and diagnosis of clinically significant portal hypertension in cirrhosis. However, standardization of diagnostic indices and their cut-off values in each non-invasive method needs to be addressed.
prognostic significance. Perfusion-weighted MRI and permeability analysis may help detect persistent perfusion abnormalities post-treatment and predict haemorrhagic complications. Post-treatment neuroimaging provides clinically relevant information to identify complications, assess prognosis and perform quality assurance after acute ischaemic stroke. Recent advances in neuroimaging represent a potential avenue to explore post-reperfusion pathophysiology and uncover therapeutic targets for secondary ischaemic and haemorrhagic injury.

Endocrinology

Hypocalcemic cardiomyopathy: a rare presenting manifestation of hypoparathyroidism

Hypoparathyroidism patients present with features of hypocalcemia like carpopedal spasm, numbness and paresthesias but hypocalcemic cardiomyopathy leading to congestive heart failure (CHF) is a rare presentation. We present here a case of 55-year-old Asian man who was a known case of dilated cardiomyopathy for 6 months, presented with the chief complaints of shortness of breath on exertion and decreased urine output. On general physical examination, features suggestive of CHF were seen. Chvostek and Trousseau’s sign was positive. The patient had a history of cataract surgery of both eyes 15 years ago. Further investigations revealed hypocalcemia. Echo showed severe global hypokinesia of left ventricle with left ventricle ejection fraction 15%. This CHF was refractory to conventional treatment, though, with calcium supplementation, the patient improved symptomatically. On follow-up after 3 months, an improvement was seen in the echocardiographic parameters with ejection fraction improving to 25%.

Saini N, et al.
BMJ Case Rep 2019 Sep 12;12(9).
Objectives: Recent large cohort studies suggest an association between high plasma prolactin and cardiovascular mortality. The objective of this systematic review was to systematically assess the effect of reducing prolactin with dopamine agonist on established cardiovascular risk factors in patients with prolactinomas.

Design: Bibliographical search was done until February 2019 searching the following databases: Pubmed, Embase, WHO and LILAC. Eligible studies had to include participants with verified prolactinomas where metabolic variables were assessed before and after at least two weeks treatment with dopamine agonists.

Methods: Baseline data and outcomes were independently collected by two investigators.

Results: Fourteen observational studies enrolling 387 participants were included. The pooled standardized mean difference of the primary outcome revealed a reduction of BMI and weight of -0.21 (95% CI: -0.37 to -0.05; p=0.01; 12 =71 %), after treatment. Subgroup analysis suggested that the reduction of weight was primarily driven by studies with high prolactin levels at baseline (p=0.04). Secondary outcomes suggested a small decrease in waist circumference, a small to moderate decrease in triglycerides, fasting glucose levels, HOMA-IR, HbA1c and hsCRP, and a moderate decrease in LDL, total cholesterol and insulin.

Conclusion: This systematic review suggests a reduction of weight as well as an improved lipid profile and glucose tolerance after treatment with dopamine agonist in patients with prolactinomas. These data are based on low quality evidence.
Diagnostic classification of soft tissue malignancies

Cloutier JM, et al.

Soft tissue sarcomas encompass a broad spectrum of histologically, clinically, and molecularly diverse neoplasms that present unique diagnostic and therapeutic challenges. Accurate classification is essential both for appropriate risk stratification and for guiding clinical management. Once classified almost exclusively based on the morphologic appearance of the tumor by light microscopy, many soft tissue sarcomas are now known to manifest recurrent patterns of genetic alterations. In addition to enabling molecular confirmation of histologic diagnoses, discovery of these recurrent genetic alterations has helped to refine existing morphologic definitions of sarcoma subtypes and even prompted the discovery of new subtypes. As therapy for sarcoma has become increasingly tailored to a specific entity, the integration of molecular data has assumed added importance in diagnostic decision making. In this article, we summarize principles of the histologic evaluation of soft tissue sarcomas, discuss specific diagnostic features of several of the most common sarcoma subtypes, and describe our vision for a future of soft tissue sarcoma diagnosis that merges morphologic, genetic, and epigenetic features to arrive at diagnoses that are aligned with tumor-specific, biologically targeted treatment approaches.

Ibrutinib-based therapy impaired neutrophils microbicidal activity
in patients with chronic lymphocytic leukemia during the early phases of treatment

Prezzo A, et al.

Ibrutinib is a tyrosine kinase inhibitor used in the treatment of a variety of lymphoid malignancies, including chronic lymphocytic leukemia (CLL). Drugs inhibiting B-cell-receptor (BCR)-associated kinases, including BTK inhibitors,
act on B cells and on a wide spectrum of tissues and cells, including innate immunity cells. Thus, alterations in the Bruton’s tyrosine kinase (BTK) kinase function could lead to an impairment of innate immune cells functions and to an increased infectious risk in patients receiving BTK inhibitors. We analyzed in vivo neutrophils oxidative burst, neutrophils granules release and cytokine production in relapsed/refractory CLL patients treated over time with ibrutinib as single-agent. We observed a dramatic reduction of neutrophils oxidative burst, Fc gamma receptors (FcγRs)-mediated degranulation and IL-8 plasma levels already after the first forty-eight hours of therapy with ibrutinib. However, ibrutinib treatment did not alter the surface expression of CD11b nor cytokine and proteinases release not mediated by FcγRs engagement. After three weeks, oxidative burst was still impaired, while degranulation and IL-8 levels were restored. In a group of CLL patients who survived for more than three years, all processes triggered by FcγRs completely recovered except the release of neutrophil elastase (NE) and IL-8. In conclusion, during the initial phases of ibrutinib therapy, the reduction of IL-8, NE, myeloperoxidase (MPO) levels and oxidative burst negatively impacted on mechanisms involved in neutrophils microbicidal activity.

Rheumatology And Orthopedics
الأمراض الرثوية وأمراض العظام

The association between gravidity, parity and the risk of developing rheumatoid arthritis
العلاقة بين الحمول والولادات وخطر تطور التهاب المفاصل الرثوى

Chen WMY, et al.
Semin Arthritis Rheum 2019 Sep 11.

Objective: To establish if gravidity and parity associate with the development of rheumatoid arthritis (RA), and to establish if this effect is influenced by the time elapsed since pregnancy/childbirth, the number of pregnancies/childbirths, and serological status, through systematically reviewing the literature and undertaking a meta-analysis.

Methods: We searched Medline/EMBASE (from 1946 to 2018) using the terms “rheumatoid arthritis.mp” or “arthritis, rheumatoid/” and “pregnancy.mp” or “pregnancy/” or “parity.mp” or “parity/” or “gravidity.mp” or
“gravidity/” (observational study filter applied). Case-control/cohort studies that examined the relationship between parity/gravidity and the risk of RA in women were included. Studies reporting effect size data for RA in ever vs. never parous/gravid women as ORs/RRs with 95% confidence intervals were included in a meta-analysis. Other relationships (i.e. risk by pregnancy/childbirth numbers) were analysed descriptively.

**Results:** Twenty studies (from 626 articles) met our inclusion criteria, comprising 14 case-control (4799 cases; 11,941 controls) and 6 cohort studies (8575 cases; 2,368,439 individuals). No significant association was observed in the meta-analysis of studies reporting the risk of RA in ever vs. never parous women (OR 0.91; 95% CI 0.80-1.04) and ever vs. never gravid women (OR 0.86; 95% CI 0.46-1.62). No consistent evidence of a relationship between the number of pregnancies/childbirths and RA risk was seen. No significant association was observed between being pregnant, or in the immediate post-partum period, and the risk of developing RA.

**Conclusion:** Our systematic review does not support the concept that gravidity and parity are associated with the risk of RA development.

**Urology And Nephrology**

**Cinacalcet plus vitamin D versus vitamin D alone for the treatment of secondary hyperparathyroidism in patients undergoing dialysis**

Xu J, et al.
Int Urol Nephrol 2019 Sep 17.

**Background:** Secondary hyperparathyroidism (SHPT) is a common and serious complication of chronic kidney disease, particularly in end-stage renal disease. Currently, both cinacalcet and vitamin D are used to treat SHPT via two different mechanisms, but it is still unclear whether the combination use of these two drugs can be a safe and effective alternative to vitamin D alone. Therefore, the aim of this meta-analysis was to assess the efficacy and safety of cinacalcet plus vitamin D in the treatment of SHPT.
Methods: Four electronic databases, including PubMed, EMBASE, Cochrane Central Register of Controlled Trials (CENTRAL), and Web of Science, were searched for eligible publications. All randomized-controlled trials comparing cinacalcet plus vitamin D with vitamin D alone in SHPT patients undergoing dialysis were included. Mean difference (MD) with 95% confidence intervals (CIs) and risk ratios (RRs) with 95% CIs were calculated using a random-effects model or fixed-effects model. Sensitivity analysis was conducted by removing any one study successively to estimate the stability of the pooled results, and subgroup analysis was carried out to explore potential sources of heterogeneity, and funnel plots were used to test publication bias.

Results: A total of 8 randomized-controlled trials involving 1480 patients were included in the study. Compared with vitamin D treatment, the combination use of cinacalcet and vitamin D significantly lowered serum calcium (MD -0.82, 95% CI -1.02 to -0.61, P<0.001), phosphorus (MD -0.57, 95% CI -0.97 to -0.18, P=0.005), and calcium × phosphorus product (MD -9.41, 95% CI -10.00 to -8.82, P<0.001). However, there was no difference in serum parathyroid hormone (PTH, MD 43.99, 95% CI -49.22 to 137.20, P=0.35), ≥30% reduction in PTH (RR 1.02, 95% CI 0.69-1.52, P=0.91), and PTH achieve 150-300 pg/ml (RR 0.88, 95% CI 0.68-1.15, P=0.35). Moreover, the combination therapy did not increase the risk of all adverse events, all-cause mortality, diarrhea, muscle spasms, and headache (all P>0.05), but had a higher risk of hypocalcemia (RR 17.98, 95% CI 5.68-56.99, P<0.001), and nausea or vomiting (RR 3.47, 95% CI 2.25-5.35, P<0.001).

Conclusions: In comparison with vitamin D alone, the combination use of cinacalcet and vitamin D significantly lowered serum calcium, phosphorus, and the calcium × phosphorus product, and did not increase the risk of all adverse events, all-cause mortality, diarrhea, muscle spasms, and headache, whereas had no effect on serum PTH and increased the risk of hypocalcemia and nausea or vomiting. Future studies are needed to assess the effects of cinacalcet plus vitamin D on PTH level, cardiovascular events, and other clinical outcomes in larger samples with longer durations.
Introduction: Acute kidney injury (AKI) is a frequent event among critically ill patients hospitalized in intensive care units (ICU) and represents a global public health problem, being imperative an interdisciplinary approach.

Objective: To investigate, through literature review, the AKI epidemiology in ICUs.

Methods: Online research in Medline, Scientific Electronic Library Online, and Latin American and Caribbean Literature in Health Sciences databases, with analysis of the most relevant 47 studies published between 2010 and 2017.

Results: Data of the 67,033 patients from more than 300 ICUs from different regions of the world were analyzed. The overall incidence of AKI ranged from 2.5% to 92.2%, and the mortality from 5% to 80%. The length of ICU stay ranged from five to twenty-one days, and the need for renal replacement therapy from 0.8% to 59.2%. AKI patients had substantially higher mortality rates and longer hospital stays than patients without AKI.

Conclusion: AKI incidence presented high variability among the studies. One of the reasons for that were the different criteria used to define the cases. Availability of local resources, renal replacement therapy needs, serum creatinine at ICU admission, volume overload, and sepsis, among others, influence mortality rates in AKI patients.
Background/objective: Sleep problems are commonly reported by individuals with Autism Spectrum Disorder (ASD). However, to date, no quantitative evidence synthesis of available studies has been performed to quantify sleep alterations in adults with ASD. We performed a systematic review and meta-analysis of objective (ie, based on actigraphy or polysomnography [PSG]) and subjective (ie, based on sleep diaries/questionnaires) studies comparing sleep parameters in adults with ASD and in a typically developing (TD) control group.

Methods: PubMed, OVID databases and Web of Knowledge were systematically searched up to February 2019 with no language restrictions. Original studies including adults with a diagnosis of ASD according to DSM, ICD, or based on standard diagnostic tools (eg, ADOS), and a TD control group were included. Random-effects models were used. Study quality was evaluated with the Newcastle Ottawa Scale (NOS). Analyses were conducted using comprehensive Meta-Analysis.

Results: From initial pool of 1948 references, 14 publications including 8 datasets, (194 ASD and 277 controls) met the inclusion criteria. Compared to controls, individuals with ASD were significantly more impaired in six out of 11 subjective parameters, including lower sleep efficiency (SE, SMD= -0.87, CI=-1.14 - 0.60) and in 10 out of 17 objective outcomes, including longer sleep onset latency (PSG) (SMD=0.86, CI=0.29-1.07) and wake after sleep onset (WASO, actigraphy) (SMD=0.57, CI=0.28-0.87). The mean NOS score was 4.88/6.

Conclusions: Individuals with ASD demonstrated impaired sleep compared to controls in most subjective and objective measures.

Anaesthesia And Intensive Care

Lidocaine-epinephrine-tetracaine gel is more efficient than eutectic mixture of local anesthetics and mepivacaine injection for pain control during skin repair in children

Introduction: Skin lacerations are common in children and their repair is a very unpleasant experience for a child. While pain management has been recognized as a key element of high-quality patient care, recent studies report that pain management in the pediatric emergency departments is still suboptimal. Lidocaine-epinephrine-tetracaine (LET) gel could potentially improve the traumatic experience caused by skin repair as it obviates the need for infiltration. Thus, the aim of the current study was to compare local eutectic mixture of local anesthetics (EMLA) plus mepivacaine infiltration with topical anesthetics (LET-gel).

Materials and methods: Prospective, propensity score-matched multicenter study including all children between 3 and 16 years presented at two centers. After anesthetics (LET vs. EMLA and infiltration) standardized skin repair was performed. Pain assessment was performed using the faces pain rating scale or visual analogue scale. Follow-up, performed 2 weeks after initial presentation, assessed wound infection rates and overall satisfaction.

Results: Of 73 subjects 59 children (37 LET vs. 22 EMLA) were included after propensity score matching. Groups had similar baseline characteristics. Pretreatment was significantly less painful in LET versus local anesthetics group. Pain during skin repair was similar between groups (LET and EMLA with mepivacaine infiltration) and both groups demonstrated similar efficacy (procedure time, need for secondary infiltration, infection rate). Ultimately, pain levels during pretreatment and the surgical procedure were perceived significantly higher by the children than estimated by parents or surgeons.

Conclusion: In conclusion, it appears that LET is superior to conventional anesthesia including mepivacaine infiltration in the pediatric emergency departments. Pretreatment with LET is significantly less painful but equally effective. Hence, we recommend LET as a topical anesthetic in the pediatric emergency department.
Dermatology

الأمراض الجلدية

Platelet-rich plasma injections
in the treatment of male androgenetic alopecia
حقن البلازما الغنية بالصفيحات في معالجة حالات الحاصة الأندروجينية عند الذكور

Dicle Ö, et al.
Cosmet Dermatol 2019 Sep 18.

Background: Platelet-rich plasma (PRP) treatment for androgenetic alopecia (AGA) has been increasingly used, yet there remains a dearth of data on the effectiveness of this approach.

Aim: To compare the efficacy and safety of physically activated PRP injections vs placebo in the treatment of male AGA.

Methods: Twenty-five healthy male patients with AGA were enrolled in a randomized, placebo-controlled, crossover study with the treatments of PRP and placebo. Treatment efficacy was measured by calculating the hair density as the average of two independent blind measurements.

Results: In the group that received placebo first (Group 2), we detected a significant increase in hair density at the secondary endpoints after PRP treatment (p=0.014). There was a greater proportion of patients with low-grade alopecia in this group (53.3%) compared to Group 1 (30%).

Conclusion: This study provides data supporting the positive effects of PRP treatment on AGA in males, but further studies are needed to identify those factors that might affect PRP treatment performance, such as the stage of the disease.

خليفة البحث: يزداد تطبيق المعالجة بحقن البلازما الغنية بالصفائح في حالات الحاصة الأندروجينية AGA، إلا أن المعطيات المتوافرة عن فاعلية هذه المعالجة ما زالت قليلة.

هدف البحث: مقارنة فعالية وسلامة المعالجة بحقن البلازما الغنية بالصفائح المفعلة ضوئياً مع المعالجة الإرضائية في حالات الحاصة الأندروجينية عند الذكور.

طريقة البحث: تم إدخال 25 من الذكور الأصحاء بحالة حاصة أندروجينية في دراسة عشوائية تعابيرية مضبوطة مع المعالجة الإرضائية في وضعية البلازما الغنية بالصفائح. تم قياس فعالية المعالجة عبر حساب كثافة الشعر كمعدل تغيير شリアル وعيديين مستقلين.

النتائج: وجدنا زيادة في كثافة الشعر ضمن نقاط المتابعة النهائية الثانية بعد المعالجة بحقن البلازما الغنية بالصفائح (0.024=p). لوحظ وجود نسبة أعلى من مراعي الحصاصات الموضعية في أقسام الإسعاف.

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الاستنتاجات: تقدم هذه الدراسة دلائل تدعم تأثيرات الإيجابية للعلاج بالبلازما الغنية بالصفائح في حالات الداء الهرموني عند الذكور، إلا أن الحاجة تبقى موجودة لدراسة العوامل التي قد تؤثر في جودة هذه المعالجة وفعاليتها، كدرجة الحساسية مثلاً.

Otorhinolaryngology

أمراض الأذن والأنف والحنجرة

Management of unilateral head and neck carcinoma of unknown primary: Retrospective analysis of the impact of postoperative radiotherapy target volumes

تدبير السرطانة أحادية الجانب محصلة المنشأ الداخلي في الرأس والعنق: تحليل

راجع لتأثيرات المعالجة العلاجية بعد الجراحة

Podeur F, et al.
Head Neck 2019 Nov 18.

Background: We compared the outcome of postoperative unilateral cervical nodes radiotherapy (UL-RT) vs bilateral cervical nodes plus total mucosal irradiation (COMP-RT) in the management of head and neck carcinoma of unknown primary (HNCUP).

Methods: HNCUP, defined by the absence of primary despite a PET-CT combined with a panendoscopy, were treated with curative intent by initial ipsilateral neck dissection. Sixty-nine patients with unilateral HNCUP were included: 23 received UL-RT while 46 received COMP-RT. Carcinologic outcomes and long-term quality of life (QOL) according to the QOL Questionnaire for Head and Neck 35 were assessed.

Results: Within 6.3 years of median follow-up, there was no significant difference in primary tumor emergence rate (P=0.68), cervical node recurrence rate (P=0.34), or overall survival (P=0.33) between UL-RT and COMP-RT groups. A trend toward QOL improvement was observed in the UL-RT group.

Conclusion: UL-RT seems to provide similar outcomes as COMP-RT in unilateral HNCUP management.

خلفية البحث: تُستم من هذه الدراسة مقارنة النتائج الملاحظة للمعالجات العلاجية بعد الجراحة في العقد الرقبية أحادية الجانب مع المعالجة العلاجية للعقد الرقبية ثنائية الجانب بعد جراحة تظليل العقد الرقبية (COMP-RT) غير معروفة المنشأ الداخلي. تم مقارنة النتائج في حالات سرطاني الرأس والعنق الذين تعرضوا للعلاج العلاجية بالvoie العلاجية المتخصصة بالvoie العلاجية قبل العلاج (PET-CT) وذلك عبر مسح من خلال الكشف السريري تحت التصوير البوزيتريني، بالإضافة إلى التحليل الداخلي الشامل. تم تقييم النتائج السرطانية للسرطان السريري (UL-RT) من خلال خطة نوعية الحياة على مدى البعيد تبعًا لاستجابة نوعية الحياة الخاصة بالvoie العلاجية والvoie العلاجية.

النتائج: لم توجد فائدة تقييدية معروفة لدرجة م汇率 (p=0.68) في معدلات الورم الداخلي، أو معدلات الورم الداخلي (p=0.33) بين المجموعتين أعلاً (مجموعة UL-RT) وال群体 العلاجية (مجموعة COMP-RT) في فترة متابعة طويلة.

الاستنتاجات: يُتي من خلال هذه الدراسة أن المعالجة العلاجية بعد الجراحة في العقد الرقبية أحادية الجانب (UL-RT) تقدم تقييم مثالي لمدى نوعية الحياة لدى المرض، مع وجود توزيع نحو تحسن نوعي في نقاط نوعية الحياة بالvoie العلاجية.

Management of unilateral head and neck carcinoma of unknown primary: Retrospective analysis of the impact of postoperative radiotherapy target volumes

تدبير السرطانة أحادية الجانب محصلة المنشأ الداخلي في الرأس والعنق: تحليل

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Podeur F, et al.
Head Neck 2019 Nov 18.

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Efficacy of the additional effect of hyperbaric oxygen therapy in combination of systemic steroid and prostaglandin E1 for idiopathic sudden sensorineural hearing loss


Purpose: The efficacies of hyperbaric oxygen therapy (HBO), systemic steroid, prostaglandin E1, or the combination of any two modalities have been reported in patients with idiopathic sudden sensorineural hearing loss (ISSNHL). However, little is known about the combined efficacy of HBO, systemic steroid, and prostaglandin E1 for this disorder. We aimed to investigate the efficacy of HBO combined with systemic steroids and prostaglandin E1 as triple therapy in patients with ISSNHL.

Materials and methods: We retrospectively evaluated the records of 67 patients with ISSNHL who were treated with systemic steroid and prostaglandin E1, with (n=38) or without (n=29) HBO. The inclusion criteria included a diagnosis of ISSNHL within 14 days of symptom onset, age ≥15 years, treatment according to the protocol, and clinical follow-up of at least 1 month. The patients’ hearing levels were evaluated 1 month after hearing loss onset. The primary outcome was hearing improvement on pure tone audiometry. We also evaluated the demographic profiles of patients.

Results: Patients treated with triple therapy showed significantly greater hearing improvement (p<0.01) than those treated without HBO, despite some differences between the two treatment groups. Multivariate logistic regression analysis revealed a significant positive correlation between pure tone audiometry improvement and hyperbaric oxygen therapy, after adjustment for confounding factors (odds ratio = 7.42; 95% confidence interval = 2.37-23.3; p=0.001).

Conclusion: HBO with systemic steroid and prostaglandin E1 administration conferred significant therapeutic benefits for ISSNHL. Therefore, routine use of triple therapy is recommended for patients with ISSNHL.

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**Ophthalmology**

الأمراض العينية

**Systematic evaluation of levodopa effect on visual improvement in amblyopia**

التقييم المنهجي لتأثيرات levodopa على تحسن القدرة البصرية في حالات الغمش

Wang SP, et al.

**Purpose:** This study aims to evaluate the effectiveness of levodopa as a therapeutic drug in the treatment of children and adults with amblyopia.

**Methods:** We performed a systematic review and meta-analysis with randomized controlled trials of levodopa and placebo in the treatment of amblyopia. All data were identified and extracted from the PubMed, EMBASE, Cochrane libraries, and the Chinese knowledge resource integration database.

**Results:** After screening the literature and evaluating the quality, 11 studies met the criteria from 308 studies. The mean difference of LogMAR visual acuity between levodopa and the placebo group was -0.1031 (95% confidence interval, -0.11 to -0.09; P<0.0001). The improvement of visual acuities of the subgroup of younger patients with amblyopia was significantly higher than that of the placebo group (P<0.0001). Increasing the dosage of levodopa and prolonging the treatment can significantly improve the curative effect.

**Conclusions:** Levodopa is effective in the treatment of amblyopia by prolonging the treatment, especially for young patients.

**Laboratory Diagnosis**

**التشخيص المخبري**

**Advances in rapid molecular blood culture diagnostics**

التطورات الطارئة في تقنيات زرع الدم الجزيئي السريعة

She RC, et al.

**Background:** For far too long, the diagnosis of bloodstream infections has relied on time-consuming blood cultures coupled with traditional organism identification and susceptibility testing. Technologies to define the culprit in
bloodstream infections have gained sophistication in recent years, notably by application of molecular methods.

**Content:** In this review, we summarize the tests available to clinical laboratories for molecular rapid identification and resistance marker detection in blood culture bottles that have flagged positive. We explore the cost-benefit ratio of such assays, covering aspects that include performance characteristics, effect on patient care, and relevance to antibiotic stewardship initiatives.

**Summary:** Rapid blood culture diagnostics represent an advance in the care of patients with bloodstream infections, particularly those infected with resistant organisms. These diagnostics are relatively easy to implement and appear to have a positive cost-benefit balance, particularly when fully incorporated into a hospital’s antimicrobial stewardship program.

**Background:** Aiming to improve the diagnosis of bloodstream infections, rapid blood culture diagnostics have become more prevalent in recent years. These methods are based on the application of molecular techniques, which offer faster results compared to traditional methods. The benefits of these rapid diagnostics include earlier identification of pathogens, which can facilitate early and appropriate antibiotic treatment. Additionally, they help in reducing antibiotic resistance by guiding antibiotic therapy more precisely.

**Methods:** The review will focus on the available molecular methods for rapid identification of bacteria and resistance markers in positive blood cultures. It will cover the technical aspects of these tests, including the equipment and reagents required, as well as the analytical performance characteristics such as sensitivity, specificity, and turnaround time. The review will also discuss the impact on patient care, including improved antibiotic stewardship and patient outcomes.

**Results:** The rapid molecular methods have shown promising results in terms of performance characteristics, with high sensitivity and specificity. They can reduce the duration of antibiotic treatment by guiding clinicians to the most effective antibiotics based on the identified pathogens. The cost-benefit ratio is generally favorable, with savings in terms of reduced hospital stay and decreased antibiotic resistance. However, the implementation of these methods requires investment in infrastructure and training, which can be a barrier to widespread adoption.

**Discussion:** The rapid blood culture diagnostics offer a significant improvement over traditional methods in the diagnosis and treatment of bloodstream infections. They are particularly advantageous in settings where timely and accurate identification of pathogens is crucial. The review will explore the potential for further development and optimization of these methods, as well as strategies for overcoming implementation challenges.
Conclusions: This novel catheter improved the success rate of selective left vertebral artery catheterization, and allowed for simplification of the relevant surgical steps. The controllability of this novel catheter was satisfactory, and its associated surgical risk was found to be low.

استنتاجات: أدى استخدام هذه القثطرة في الشريان الكعبري إلى تحسين نسبة نجاح عملية القثطرة الانتقائية للشريان الفقري الأيسر، كما سمحت بتسهيل الخطوات الجراحية ذات الصلة. إن القثطرة على التحكم بهذه القثطرة كان مفولاً، كما لوحظ أن الخطورة الجراحية المراهقة كانت منخفضة.