
**Intra-abdominal pressure measurements in lateral decubitus versus supine position.**
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**OBJECTIVE:** Intra-abdominal pressure (IAP) has traditionally been measured in the supine position, however, measuring the pressure in lateral semi-recumbent position has not been studied. **DESIGN:** A single centre prospective 1-day study. **PATIENTS:** 10 patients admitted for more than 24 hours who were mechanically ventilated and had an indwelling urinary catheter. **METHODS:** Inclusion criteria included were age > 18 years, sedated to a RASS score of -5 and mechanically ventilated. The pressures were measured via the bladder with the mid-axillary line as zero reference point. When patients were nursed in lateral decubitus, pressures were measured and compared immediately to the supine position. **RESULTS:** 10 patients were included with a total of 60 measurements. The male/female ratio was 9:1 with a mean APACHE II score of 11.5 [95% CI 4.8-22.4], SAPS 2 of 31.5 [95% CI 8.9-35.8] and SOFA score of 4.0 [95% CI 1.8-7.2]. Four patients were medical and 6 were surgical. The mean IAP at different time intervals (morning, afternoon and evening) in lateral and supine position were 10.9 +/- 2.0 (in mmHg) vs 6.6 +/- 3.2 (SD with p < 0.001); 11.0 +/- 4.0 vs 5.4 +/- 2.2 (p < 0.0005) and 11.6 +/- 3.8 vs 7.8 +/- 3.0 (p < 0.001). Overall, the LSP did not change significantly (p= 0.76), but the SP did (p=0.006) with the afternoon reading being significantly lower than the evening measurement. However, the trend in the difference (LSP minus SP) was not significant (p=0.43). **CONCLUSION:** There was a significant statistical difference in the pressures measured in LSP versus SP. The LSP position should not be used to measure IAP.

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**Adrenaline for the treatment of anaphylaxis: Cochrane systematic review.**
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**Background:** Anaphylaxis is a serious allergic reaction that is rapid in onset and may cause death. Adrenaline is recommended as the initial treatment of choice for anaphylaxis., **Objectives:** To assess the benefits and harms of adrenaline in the treatment of anaphylaxis., **Methods:** We searched the Cochrane Central Register of Controlled Trials (CENTRAL) (The Cochrane Library 2007, Issue 1), MEDLINE (1966 to March 2007), EMBASE (1966 to March 2007), CINAHL (1982 to March 2007), BIOSIS (to March 2007), ISI Web of Knowledge (to March 2007) and LILACS (to March 2007). We also searched websites listing ongoing trials: http://www.clinicaltrials.gov/, http://www.controlledtrials.com and http://www.actr.org.au/ and contacted pharmaceutical companies and international experts in anaphylaxis in an attempt to locate unpublished material. Randomized and quasi-randomized controlled trials comparing adrenaline with no intervention, placebo or other adrenergic agonists were eligible for inclusion. Two authors independently assessed articles for inclusion., **Results:** We found no studies that satisfied the inclusion criteria., **Conclusions:** On the basis of this review, we are unable to make any new recommendations on the use of adrenaline for the treatment of anaphylaxis. In the absence of appropriate trials, we recommend, albeit on the basis of less than optimal evidence, that adrenaline administration by intramuscular injection should still be regarded as first-line treatment for the management of anaphylaxis., Copyright (C) 2009 Blackwell Publishing Ltd.
Randomized trial comparing 600- with 300-mg loading dose of clopidogrel in patients with non-ST elevation acute coronary syndrome undergoing percutaneous coronary intervention: Results of the Platelet Responsiveness to Aspirin and Clopidogrel and Troponin Increment after Coronary intervention in Acute coronary Lesions (PRACTICAL) Trial.
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Background: There is uncertainty about the benefit of a higher loading dose (LD) of clopidogrel in patients with non-ST elevation acute coronary syndrome (NSTEACS) undergoing early percutaneous coronary intervention (PCI). Methods: We compared the effects of a 600- versus a 300-mg LD of clopidogrel on inhibition of platelet aggregation, myonecrosis, and clinical outcomes in patients with NSTEACS undergoing an early invasive management strategy. Patients with NSTEACS (n = 256, mean age 63 years, 81.6% elevated troponin) without thienopyridine for at least 7 days were randomized to receive 600- or 300-mg LD of clopidogrel. Percutaneous coronary intervention was performed in 140 patients, with glycoprotein IIb/IIIa inhibitor use in 68.6%. Adenosine diphosphate (ADP)-induced platelet aggregation was measured by optical platelet aggregometry immediately before coronary angiography. Results: Post-PCI myonecrosis was defined as a next-day troponin I greater than 5 times the upper limit of reference range and greater than baseline levels. Clopidogrel 600-mg LD compared with 300-mg LD was associated with significantly reduced ADP-induced platelet aggregation (49.7% vs 55.7% with ADP 20 [μmol/L]) but did not reduce post-PCI myonecrosis or adverse clinical outcomes to 6 months. There was no association between preprocedural platelet aggregation and outcome. Conclusions: These data confirm a modest incremental antiplatelet effect of a 600-mg clopidogrel LD compared with 300-mg LD but provide no support for a clinical benefit in patients with NSTEACS managed with an early invasive strategy including a high rate (69%) of glycoprotein IIb/IIIa inhibitor use during PCI.

CD117 is not a useful marker for diagnosing atypical fibroxanthoma.
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Atypical fibroxanthoma (AFX) is a rare skin tumor that generally pursues an indolent course despite its alarming histological appearances. It is important for the pathologist to distinguish this neoplasm from more aggressive lesions that may show very similar histological features. Recently, it has been suggested that demonstration of CD117 is of value in identifying AFX. To test this hypothesis, 50 cases of AFX were stained immunohistochemically for CD117 to determine the diagnostic value of this antibody. Cases were also stained for tryptase to identify mast cells, which are CD117 positive. In addition, S100 and CD1a stains were performed to assess any possible contribution of melanocytes or Langerhans cells to CD117 staining. Only 1 of 50 AFXs (2%) showed CD117 positivity in the neoplastic cells, but all tumors demonstrated included CD117- and tryptase-positive mast cells in similar distribution. CD117 is only rarely stainable in the neoplastic cells of AFX and is therefore not useful in identifying these tumors. Mast cells are also CD117 positive, frequently present in AFX, and can lead to misinterpretation. Using immunohistochemistry for mast cell tryptase may be of value where there is doubt as to the nature of CD117-positive cells in neoplasms.

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OBJECTIVES: Elevations of serum alanine aminotransferase (ALT) are common and have been associated with metabolic syndrome (Met S) and cardiovascular risk. The aim of this study was to determine whether elevated ALT concentrations are predictive of Met S or cardiovascular events.

METHODS: In 1994/95, surviving participants of the previously conducted Busselton health population surveys completed a series of clinical and biochemical assessments. Using the Western Australian Health Department data linkage system, admissions for cardiovascular disease (CVD) were determined for 15 years before the survey (from 1980 to 1994). Incident CVD events during the 10-year follow-up period to the end of 2004 were also ascertained. Met S was defined using NCEP ATP III (2005) criteria.

RESULTS: 3,719 Subjects (1,544 men and 2,175 women), aged 25-84 years who did not have serologically diagnosable chronic liver diseases or excessive consumption of alcohol, had their levels of ALT measured. The prevalence of Met S was 17% in men and 15% in women. In age-adjusted analyses, ALT was significantly associated with Met S and each of its five components and the association with Met S remained significant after adjustment for insulin resistance. There was no positive association between ALT and incident CVD events over the 10-year follow-up period in age-adjusted or multivariate-adjusted analyses.

CONCLUSIONS: The findings from this Australian population-based cohort study support a strong association between ALT concentration and Met S independent of insulin resistance. Serum ALT level does not appear to contribute significantly to cardiovascular risk assessment. copyright 2009 by the American College of Gastroenterology.

NAFLD as a Risk Factor for the Development of Diabetes and the Metabolic Syndrome: An Eleven-Year Follow-up Study.

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OBJECTIVES: Non-alcoholic fatty liver disease (NAFLD) uncommonly results in cirrhosis and liver-related death; however, its impact on the development of metabolic complications remains unclear. We sought to determine whether NAFLD with elevated aminotransaminase (ALT) levels was a risk factor for incident diabetes or the metabolic syndrome (MS) over an 11-year period.

METHODS: Adult residents of Busselton, Western Australia underwent assessment in 1994-1995 as part of the Busselton Health Survey. NAFLD was diagnosed on the basis of a raised ALT (>40 IU/l) after the exclusion of alcohol, viral, metabolic, and autoimmune liver disease. NAFLD and non-NAFLD subjects were reassessed in 2005 for liver complications, diabetes, and the MS.

RESULTS: A total of 358 subjects, 68% male (109 NAFLD, 249 non-NAFLD), mean age (s.d.) 59.9 (11.6) years, attended follow-up 11.1 years after the initial assessment. After excluding subjects with diabetes at baseline, those with NAFLD were more likely to have developed diabetes on follow-up (20/106, 18.9% vs. 15/246, 6.1%; P<0.001). After excluding subjects with MS at baseline, those with NAFLD were more likely to have developed MS at follow-up (27/81, 33.3% vs. 51/226, 22.6%; P=0.056). However, in multivariate logistic regression models, NAFLD was no longer a significant independent predictor of the development of diabetes or MS after adjusting for baseline waist circumference, hypertension, and insulin resistance. None of the subjects developed liver complications.

CONCLUSIONS: Subjects with NAFLD and elevated ALT levels are at an increased risk of developing diabetes and the MS. This may be because of the presence of associated metabolic risk factors.


Apathy Predicts More Severe Parkinsonism in Alzheimer's Disease.

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Objectives: Parkinsonian signs are frequent in Alzheimer disease (AD) and are associated with a faster cognitive decline, worse quality of life, and early nursing home admission. Cross-sectional studies in AD reported a significant association between parkinsonism and apathy. The aim of this study was to assess the chronological association between apathy and parkinsonism in AD.

Design: Longitudinal study of a consecutive series of patients with AD.

Setting: Dementia clinic from a tertiary clinical center.

Participants: One hundred sixty-nine patients meeting diagnostic criteria for AD.

Intervention: A consecutive series of 169 patients with probable AD were assessed for the presence of parkinsonism, cognitive deficits, apathy, and depression with the Unified Parkinson's Disease Rating Scale and a comprehensive neuropsychiatry assessment. One hundred thirty-six (80%) of the patients had a follow-up assessment between 1 and 4 years after the baseline evaluation.

Measurements: Scores on apathy, parkinsonism, and depression scales at follow-up were the main outcome measures.

Results: Patients with apathy at baseline or those who developed apathy during follow-up had a significant increase in parkinsonism at follow-up when compared with patients with no apathy at both assessments. The association between apathy and increasing parkinsonism was unrelated to age, gender, the severity of cognitive deficits, the presence of depression, or use of psychotropic medications. On the other hand, neither the presence of parkinsonism nor depression at baseline was significantly associated with more severe apathy at follow-up.

Conclusion: Apathy may be an early
manifestation of a more aggressive AD phenotype characterized by loss of motivation, increasing parkinsonism, a faster cognitive and functional decline, and more severe depression., Copyright (C) 2009 American Association for Geriatric Psychiatry

A single-nucleotide polymorphism in the gene encoding osteoprotegerin is associated with diastolic blood pressure in older men.
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Background Osteoprotegerin (OPG) has been associated with cardiovascular events but currently the mechanisms underlying this association are unknown. OPG is thought to play a role in controlling artery calcification and small studies have suggested that it may influence artery structure. We examined the association between single nucleotide polymorphisms (SNPs) in the gene encoding OPG (tumor necrosis factor receptor superfamily, member 11b, TNFRSF11B), with blood pressure in a large cohort of elderly men.

Methods 21 tagging SNPs in the region encoded by TNFRSF11B were examined in 1,071 men recruited in a population-based study of elderly men. Genotyping was carried out using the Illumina Golden Gate assay. SNPs were investigated for their association with resting systolic and diastolic blood pressure after adjusting for other variables using linear regression. The association of SNPs in the region encoded by TNFRSF11B with plasma OPG was assessed in a random subset of 467 men.

Results One SNP, rs11573901, was significantly associated with diastolic blood pressure, after adjusting for other risk factors and multiple testing (coefficient 4.36, P = 0.001). Men with the TC genotype had lower diastolic blood pressure than those with the common CC variation. This SNP was not associated with plasma OPG in the 467 men in which this was examined.

Conclusions This study suggests that a SNP within the region encoded by TNFRSF11B, which is believed to code for OPG, is associated with blood pressure. The mechanism underlying this observed association is currently unclear. copyright 2009 American Journal of Hypertension, Ltd.
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The role of transferrin receptor 1 and 2 in transferrin-bound iron uptake in human hepatoma cells.
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Transferrin receptor (TFR) 1 and 2 are expressed in the liver; TFR1 levels are regulated by cellular iron levels while TFR2 levels are regulated by transferrin saturation. The aims of this study were to 1) determine the relative importance of TFR1 and TFR2 in transferrin-bound iron (TBI) uptake by HuH7 human hepatoma cells and 2) characterize the role of metal-transferrin complexes in the regulation of these receptors. TFR expression was altered by 1) incubation with metal-transferrin (Tf) complexes, 2) TFR1 and TFR2 small interfering RNA knockdown, and 3) transfection with a human TFR2 plasmid. TBI uptake was measured using (59)Fe-(125)I-labeled Tf and mRNA and protein expression by real-time PCR and Western blot analysis, respectively. Fe(2)Tf, Co(2)Tf, and Mn(2)Tf increased TFR2 protein expression, indicating that the upregulation was not specifically regulated by iron-transferrin but also other metal-transferrins. In addition, Co(2)Tf and Mn(2)Tf upregulated TFR1, reduced ferritin, and increased hypoxia-inducible factor-1alpha protein expression, suggesting that TFR1 upregulation was due to a combination of iron deficiency and chemical hypoxia. TBI uptake correlated with changes in TFR1 but not TFR2 expression. TFR1 knockdown reduced iron uptake by 80% while TFR2
knockdown did not affect uptake. At 5 microM transferrin, iron uptake was not affected by combined TFR1 and TFR2 knockdown. Transfection with a hTFR2 plasmid increased TFR2 protein expression, causing a 15-20% increase in iron uptake and ferritin levels. This shows for the first time that TFR-mediated TBI uptake is mediated primarily via TFR1 but not TFR2 and that a high-capacity TFR-independent pathway exists in hepatoma cells.

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Measuring the assessment and counseling provided with the supply of nonprescription asthma reliever medication: A simulated patient study.

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BACKGROUND: Over one quarter of asthma reliever medications are provided without prescription by community pharmacies in Australia. Evidence that community pharmacies provide these medications with sufficient patient assessment and medication counseling to ensure compliance with the government's Quality Use of Medicines principles is currently lacking. OBJECTIVE: To assess current practice when asthma reliever medication is provided in the community pharmacy setting and to identify factors that correlate with assessment of asthma control. METHODS: Researchers posing as patients visited a sample of Perth metropolitan community pharmacies in May 2007. During the visit, the simulated patient enacted a standardized scenario of someone with moderately controlled asthma who wished to purchase a salbutamol (albuterol) inhaler without prescription. Results of the encounter were recorded immediately after the visit. Regression analysis was performed, with medication use frequency (a marker of asthma control) as the dependent variable. RESULTS: One hundred sixty community pharmacies in the Perth metropolitan area were visited in May 2007. Pharmacists and/or pharmacy assistants provided some form of assessment in 84% of the visits. Counseling was provided to the simulated patients in 24% of the visits. Only 4 pharmacy staff members asked whether the simulated patient knew how to use the inhaler. Significant correlation was found between assessment and/or counseling of reliever use frequency and 3 independent variables: visit length (p < 0.001), number of assessment questions asked (p < 0.001), and the simulated patient who conducted the visit (p < 0.02). CONCLUSIONS: Both patient assessment and medication counseling were suboptimal compared with recommended practice when nonprescription asthma reliever medication was supplied in the community pharmacy setting. Pharmacy and pharmacist demographic variables do not appear to affect assessment of asthma control. This research indicates the need for substantial improvements in practice in order to provide reliever medication in line with Quality Use of Medication principles of ensuring safe and effective use of medication.

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Pharmacokinetic properties of sulfadoxine-pyrimethamine in pregnant women.
To determine the pharmacokinetic disposition of sulfadoxine (SDOX) and pyrimethamine (PYR) when administered as intermittent presumptive treatment during pregnancy (IPTp) for malaria, 30 Papua New Guinean women in the second or third trimester of pregnancy and 30 age-matched nonpregnant women were given a single dose of 1,500 mg of SDOX plus 75 mg of pyrimethamine PYR. Blood was taken at baseline and 1, 2, 4, 6, 12, 18, 24, 30, 48, and 72 h and at 7, 10, 14, 28, and 42 days posttreatment in all women. Plasma samples were assayed for SDOX, N-acetylsulfadoxine (NASDOX), and PYR by high-performance liquid chromatography. Population pharmacokinetic modeling was performed using NONMEM v6.2.0. Separate user-defined mamillary models were fitted to SDOX/NASDOX and PYR. When the covariate pregnancy was applied to clearance, there was a significant improvement in the base model for both treatments. Pregnancy was associated with a significantly lower area under the concentration-time curve from 0 to infinity for SDOX (22,315 versus 33,284 mg x h/liter), NASDOX (801 versus 1,590 mg x h/liter), and PYR (72,115 versus 106,065 microg x h/liter; P < 0.001 in each case). Because lower plasma concentrations of SDOX and PYR could compromise both curative efficacy and posttreatment prophylaxis in pregnant patients, IPTp regimens incorporating higher mg/kg doses than those recommended for nonpregnant patients should be considered.

PMID:19620325


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The in vitro sensitivity of Plasmodium falciparum to atorvastatin and rosuvastatin was assessed using chloroquine-sensitive and chloroquine-resistant strains. Although atorvastatin was more potent, it had weak activity (mean 50% inhibitory concentration of [greater-than or equal to]17 muM) and an indifferent interaction with chloroquine and dihydroartemisinin. Bioassay of plasma from an atorvastatin-treated subject showed similar results. Copyright copyright 2009, American Society for Microbiology. All Rights Reserved.

PMID:2009249592

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PMID:19895509

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Background: Fundic gland polyps (FGPs) of the stomach were originally described in association with familial polyposis syndromes. It is now known that the majority of these polyps occur in the sporadic setting and are incidentally seen in up to 1.9% of routine upper gastrointestinal endoscopes. The aim of this study was to look at the clinico-pathological features of the FGPs and to analyse their relationship to Helicobacter pylori infection, proton pump inhibitor treatment, colonic polyps and malignancy. Methods: A search of the histopathology records for a period of 10 years from 1997 to 2006 identified 120 patients with a histologically confirmed diagnosis of FGPs. The clinical history, upper gastrointestinal endoscopy findings, histopathology and colonoscopy findings were recorded from the medical records and analysed. Results: FGPs were seen in 3.2% of patients undergoing routine upper gastrointestinal endoscopes. There was a definite association with long-term proton pump inhibitor treatment. There was a strikingly low incidence of H. pylori infection in the study population. Although there was no dysplasia or malignancy in any of these polyps, one patient had concomitant adenocarcinoma of the stomach. In the subgroup of patients who also had colonoscopy during the study period, 19% had associated colonic polyps and 6% had associated colonic malignancies. Conclusions: Every new patient diagnosed with FGPs should have a thorough clinico-pathological study to see if the polyps are part of a sporadic or syndromic setting. A long-term follow-up study of patients with FGPs and its association with colonic polyps may be warranted. copyright 2009 Royal Australasian College of Surgeons.

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Early results in the treatment of proximal humeral fractures with a polyaxial locking plate.
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Objectives: We report early results using a second generation locking plate, non-contact bridging plate (NCB PH, Zimmer Inc. Warsaw, IN, USA), for the treatment of proximal humeral fractures. The NCB PH combines conventional plating technique with polyaxial screw placement and angular stability.

Design: Prospective case series. Setting: A single level-1 trauma center. Patients: A total of 50 patients with proximal humeral fractures were treated from May 2004 to December 2005. Intervention: Surgery was performed in open technique in all cases. Main outcome measures: Implant-related complications, clinical parameters (duration of surgery, range of motion, Constant-Murley Score, subjective patient satisfaction, complications) and radiographic evaluation [union, implant loosening, implant-related complications and avascular necrosis (AVN) of the humeral head] at 6, 12 and 24 weeks. Results: All fractures available to follow-up (48 of 50) went to union within the follow-up period of 6 months. One patient was lost to follow-up, one patient died of a cause unrelated to the trauma, four patients developed AVN with cutout, one patient had implant loosening, three patients experienced cutout and one patient had an axillary nerve lesion (onset unknown). The average age- and gender-related Constant Score (n = 35) was 76. Conclusions: The NCB PH combines conventional plating technique with polyaxial screw placement and angular stability. Although the complication rate was 19%, with a reoperation rate of 12%, the early results show that the NCB PH is a safe implant for the treatment of proximal humeral fractures. copyright Springer-Verlag 2009.

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**Randomized phase II trial of gemcitabine and either day 1 or day 8 carboplatin for advanced non-small-cell lung cancer: Is thrombocytopenia predictable?**

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**Aim:** Two 21-day gemcitabine-carboplatin schedules were evaluated in patients with advanced non-small cell lung cancer in order to assess the effect of timing of the carboplatin dose on toxicity and efficacy.

**Methods:** Patients were randomized to gemcitabine (1000 mg/m² on days 1 and 8 of a 21-day cycle) and carboplatin (AUC 5, on day 1) (Carbo d1 arm) or the same gemcitabine schedule with carboplatin given on day 8 (Carbo d8 arm). Twenty patients with Stage IIIB or IV non-small-cell lung cancer were enrolled in each arm.

**Results:** The achieved dose intensities of both gemcitabine and carboplatin were significantly higher in the Carbo d1 arm. The total rates of grade 3 or 4 hematological and non-hematological toxicities (any toxicity, any cycle) were 80% and 65%, respectively, with no significant differences between the two arms. Nine patients in the Carbo d1 arm, but only one patient in the Carbo d8 arm, required a platelet transfusion. There were 10 partial responses (four Carbo d1 arm, six Carbo d8 arm), giving an overall response rate of 25% (95% CI 13-41%).

**Conclusion:** Administration of carboplatin on day 8 of this regimen confers no clear advantage compared with day 1 carboplatin, with similar toxicity but lower dose intensity. A formula for the prediction of thrombocytopenia is proposed. Copyright (C) 2009 Blackwell Publishing Ltd.


**PEP005 (ingenol mebutate) gel, a novel agent for the treatment of actinic keratosis: Results of a randomized, double-blind, vehicle-controlled, multicentre, phase IIa study.**


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**SUMMARY:** The sap of the plant Euphorbia peplus is a traditional remedy for skin conditions, including actinic keratosis. The active constituent of the sap is ingenol mebutate (ingenol-3-angelate), formerly known as PEP005. This randomized, double-blind, vehicle-controlled, phase IIa study investigated the safety (and secondarily the efficacy) of two applications of ingenol mebutate gel in 58 patients with biopsy-confirmed actinic keratosis. Five preselected lesions were treated with ingenol mebutate gel, 0.0025%, 0.01% or 0.05%, or vehicle gel, on days 1 and 2 (Arm A) or days 1 and 8 (Arm B). There were no significant differences in tolerability or efficacy between Arms A and B. Treatment was well tolerated. The most common local skin responses were dose-related erythema, flaking/scaling/dryness and scabbing/crusting. Efficacy was greatest with ingenol mebutate gel, 0.05%, which resulted in complete clinical clearance of 71% of treated lesions (P < 0.0001 vs vehicle gel). In addition, 67% of patients treated with ingenol mebutate gel, 0.05% had clinical clearance of at least four of five treated lesions (P = 0.0185 vs vehicle gel). Ingenol mebutate gel is being developed as a short-course topical therapy for actinic keratosis and non-melanoma skin cancer. Copyright (C) 2009 Blackwell Publishing Ltd.


**Update on diabetes.**

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Management of end of stage COPD.
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Characteristics and outcomes of older people presenting with acute upper gastrointestinal bleeding.
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Hepatitis C virus management of older patients in two tertiary hospital clinics: a retrospective cohort study.
Tate J, Miczkova S, et al.
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The 5 most exciting things in pain medicine.
Visser EJ.
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Hallucinations arising in the context of torn attachment, traumatic childhood and tapeworms.
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OBJECTIVE: The aim of this paper is to describe the processes underlying psychotic symptoms in an adolescent who presented to our service at the age of 15 years. CONCLUSION: A teenage female presented having experienced her early childhood in a war-torn third-world country, during which time her mother died, and she suffered worm infestation, neglect and trauma, before being adopted by a family in a developed country, where she lived for several years prior to relocating to Australia. The presenting complaints included longstanding anxiety, depressive and dissociative symptoms, with subsequent behavioural problems and learning difficulties. More recently, she had developed auditory hallucinations, and the antipsychotic she had been taking was beneficial. An MRI of the brain demonstrated lesions in keeping with healed parasitic disease (neurocysticercosis). The patient’s hallucinations are discussed in the context of the relationship between a traumatic childhood and psychosis, and neurocysticercosis. Within months of her presentation, the hallucinations resolved as her step-mother became more available. Her antipsychotic medication is being carefully decreased, and the patient is engaging in psychological therapies to deal with her past trauma and disrupted attachment.
PMID:19404821

Controversies in type 2 diabetes - An update.
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BACKGROUND: Controversy has emerged concerning the risks associated with glitazone therapy in type 2 diabetes, specifically bone fracture and myocardial infarction. Results from the Action to Control Cardiovascular Risk in Diabetes (ACCORD) study have stimulated debate about appropriate glycated haemoglobin (HbA1c) targets. OBJECTIVE: This article examines the context for glitazone therapy in patients with type 2 diabetes, the risks associated with pioglitazone and rosiglitazone, and arguments for targeting HbA1c at the threshold of 7%. DISCUSSION: Pioglitazone and rosiglitazone can be employed as oral therapy in patients with type 2 diabetes and preserved endogenous insulin secretion. Potential benefits and risks of each agent should be considered. An acceptable initial target for HbA1c is 7%. Lowering HbA1c to 6.5% did not reduce macrovascular complications in patients with type 2 diabetes, but did reduce new or worsening nephropathy. Aggressive therapy aiming to lower HbA1c to <6% in patients with type 2 diabetes at especially high risk of cardiovascular disease may lead to a higher risk of mortality.

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Maintaining imatinib >= 600 MG daily in the first 12 months of chronic phase cml treatment is associated with superior event-free survival at 5 years.

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The Australasian Leukaemia and Lymphoma Group conducted a trial (TIDEL I) in 103 patients with newly diagnosed chronic phase CML, using imatinib 600 mg/day with dose escalation to 800 mg/day for suboptimal response. This was defined as failure to achieve (1) complete haematological response (CHR) at 3 months, (2) major cytogenetic response (MCR) at 6 months, (3) complete cytogenetic response (CCR) or molecular equivalent at 9 months, or (4) less than 0.01% (IS) BCR-ABL by RQ-PCR at 12 months. Here we report the outcomes with all surviving patients having been treated for at least 60 months. We aimed to determine whether the patient outcome at 60 months was predicted by the molecular response within the first 18 months of imatinib therapy. The outcomes for patients maintaining a dose of imatinib of >=600 mg/day in the first 12 months was compared to those who were on a reduced dose for at least part of this time. Event-free survival (EFS) was defined as death from any cause, accelerated phase/blast crisis (AP/BC), and loss of CHR, MCR or CCR. The 103 patients included 66 males and 37 females with a median (+/-SD) age of 49 (+/-14) years. All patients had an ECOG performance status of 0-2 at enrolment. The 5-year EFS was 71%, transformation (AP/BC) free survival (TFS) was 95%, and overall survival was 87%. Of the 14 patients who died, 3 died in blast crisis, 2 from transplant-related complications, 8 from CML-unrelated causes, and the cause of death of 1 patient was unavailable. The annual rates of progression to AP/BC over 5 years
were 3%, 1%, 0%, 1%, and 0%, while annual event rates were 13%, 8%, 8%, 1%, and 4%. CCR was achieved by 89% of patients by 60 months, while 72% achieved a major molecular response (MMR) by this time. In the first 12 months of treatment, 55% of patients maintained an imatinib dose of >=600 mg/day (mean +/-SD dose = 604 +/-10 mg/day), while 45% were on <600 mg/day for at least part of this time (mean +/-SD dose = 511 +/-100 mg/day). EFS at 60 months was significantly higher in patients taking >=600 mg/day compared with those who had been dose-reduced to <600 mg/day (89% vs 56%, P<0.001). Annual event rates for the >=600 mg/day group were 6%, 2%, 2%, 0%, and 2%, while annual event rates for those on <600 mg/day were 14%, 16%, 16%, 8%, and 4%. By 60 months, 96% of patients who had been on >=600 mg/day within the first 12 months had achieved CCR, while only 80% of those who had been on <600 mg/day had achieved this milestone (P<0.001). Log rank analysis of the achievement of MMR was also significant (P=0.03). Overall survival and TFS after 12 months were both similar between the dosing groups. There was no difference between the dosing groups’ median age (50 vs 48 years, P=0.36) or Sokal score (1.04 vs 0.94, P=0.33) that may otherwise account for these results. The outcome was also determined for all patients dependent on the BCR-ABL levels at various assessment timepoints. Patients with a BCR-ABL level of <10% (IS) at 6 months (n=92) had an EFS of 78% at 60 months, while all of those with a level >10% (IS) (n=8) had an event (P<0.001). Patients with a level of <=1% (IS) at 12 months (equivalent to CCR) (n=81) had an EFS of 75% compared with 25% (n=13) for those with levels >1% (IS) (P<0.001). At 18 months, a level >0.1% (IS) (n=58) conferred an EFS of 88%, while those who had failed to attain this depth of response (n=30) had an EFS of 60%. There was a significant difference in EFS between those who had achieved an MMR at 18 months and those who had achieved a CCR, but no MMR (88% vs 67%, P=0.03). In conclusion, our data suggest that patients maintaining a dose of >=600mg in the first 12 months of imatinib therapy are more likely to achieve CCR and MMR, and superior EFS compared to those with a lower dose. This study also confirms that achieving an MMR by 18 months is associated with improved EFS. This emphasises the value of achieving a molecular response early in the treatment course, as well as adding weight to the evidence supporting the role of molecular monitoring in CML.

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Potential supplementary utility of combined PFA-100 and functional von Willebrand factor testing for the laboratory assessment of desmopressin and factor concentrate therapy in von Willebrand disease.
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We performed a retrospective audit of cross-laboratory testing of desmopressin and factor concentrate therapy to assess the potential utility of supplementary testing using the PFA-100 with functional von Willebrand factor (VWF) activity testing. Data were evaluated for a large number of patients with von Willebrand disease of type 1, type 2A or type 2M, as well as a comparative subset of individuals with haemophilia or carriers of haemophilia. Laboratory testing comprised pre and postdesmopressin, or pre and postconcentrate, evaluation of factor VIII, VWF antigen (VWF:Ag) and VWF ristocetin cofactor activity as traditionally performed, supplemented with collagen-binding (VWF:CBB) testing and PFA-100
closure times. In brief, both therapies tended to normalize VWF test parameters and closure times in individuals with type 1 von Willebrand disease, with the level of correction in closure times related to the level of normalization of VWF, particularly the VWF:CB. However, although occasional correction of closure times was observed in patients with type 2A or type 2M von Willebrand disease, these did not in general normalize PFA-100 closure times either with desmopressin or factor concentrate therapy. In these patients, improvement in closure times was more likely in those in whom VWF:CB values normalized or when VWF:CB/VWF:Ag ratios normalized. This study confirms that there is a strong relationship between the presenting levels of plasma VWF and PFA-100 closure times, and that the supplementary combination of PFA-100 and VWF:CB testing might provide added clinical utility to current broadly applied testing strategies limited primarily to VWF:Ag, VWF ristocetin cofactor and factor VIII:coagulant. Future prospective investigations are warranted to validate these relationships and to investigate their therapeutic implications. copyright 2009 Lippincott Williams & Wilkins, Inc. PMID:2009465849

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Splenic artery aneurysm rupture: case report of this uncommon presentation.
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Rupture of a splenic artery aneurysm remains an uncommon cause of hypovolaemic shock in the emergency department. This case report highlights that rapid resuscitation, diagnostic imaging, surgical consultation and subsequent laparotomy remain the priorities in patient management

Effect of dosing frequency on the safety and efficacy of imiquimod 5% cream for treatment of actinic keratosis on the forearms and hands: a phase II, randomized placebo-controlled trial.
Gebauer K, Shumack S, et al.
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BACKGROUND: Clinical studies in cutaneous conditions other than actinic keratosis (AK) have revealed that the safety and efficacy profile of imiquimod is influenced by dosing frequency.
OBJECTIVES: To evaluate dosing frequency response of imiquimod 5% for treatment of AK.
METHODS: This was a phase II, multicentre, randomized, double-blind, placebo-controlled study. Adults with > or = 10 but < or = 50 clinical AKs, one of which was histologically confirmed, were randomized (4:1) to 2-6 packets of imiquimod or placebo cream applied to the dorsum of the forearms and hands once daily 2, 3, 5 or 7 times per week for 8 weeks. The primary endpoint was complete clearance of AKs in the treatment area at 8 weeks post-treatment. RESULTS: One hundred and forty-nine (94 men and 54 women) white subjects, with a mean +/- SD age of 71 +/- 10.2 years, were enrolled. Twenty-eight subjects (18.8%) discontinued from study: 0%, 3.1%, 6.9%, 30.0% and 33.3% withdrew for local skin reactions or adverse events in the combined placebo, and in the imiquimod 2, 3, 5 or 7 times per week groups, respectively. Seven serious adverse events occurred; none was related to the study drug. Median baseline lesions ranged from 38 to 40 for the treatment groups. Complete clearance was achieved in 0%, 3.2%, 6.9%, 3.3% and 6.7% of subjects, and partial clearance (> or = 75% lesion reduction) in 0%, 22.6%, 24.1%, 20.0% and 36.7% of subjects for the placebo and imiquimod 2, 3, 5 or 7 times per week regimens, respectively. CONCLUSIONS: Imiquimod 5% applied more frequently than 3 times per week to AKs was not well tolerated. Complete clearance rates were low; however, partial clearance rates increased with increased dosing frequency (P = 0.002).


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Background: Previous studies have suggested a role for transforming growth factor (TGF) [beta] and its receptor in thoracic aortic aneurysm, but their role in abdominal aortic aneurysm (AAA) is unknown. This study examined the possible association between TGF-[beta] receptor 1 and 2 (TGFBR-1 and -2) single nucleotide polymorphisms (SNPs) and serum TGF-[beta]1 with AAA.

Methods: Serum concentrations of TGF-[beta]1 and 58 SNPs for TGFBR-1 and -2 were examined in 1003 and 1711 men respectively from the Health In Men Study. Validation of SNPs was examined in a second referral cohort of 1043 subjects from New Zealand, of whom 654 had an AAA.

Results: Serum TGF-[beta]1 was not associated with AAA. Only one SNP in TGFBR-2 was weakly associated with AAA; TGFBR2 g.42917C > T, SNP ID rs1078985CC; odds ratio 0.64 (95 per cent confidence interval (c.i.) 0.45 to 0.93); P = 0.020 uncorrected; but this association did not hold after adjusting for multiple testing and was not validated in the New Zealand cohort: odds ratio 0.98 (95 per cent c.i. 0.50 to 1.94); P = 0.960.

Conclusion: These findings suggest there is no important role of genetic polymorphisms in the main receptors for TGF-[beta] and circulating TGF-[beta]1 in AAA in older individuals.

Usefulness of Holter monitoring, thrombophilia and vasculitis screening tests in the investigation of a heterogenous group of ischaemic stroke patients: 23 Etiology of stroke.


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The utility of conjugate eye deviation on computerised tomography of the brain as a marker of stroke in patients assessed at a large tertiary emergency department: 18 Brain imaging.


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PMID:20011212


Reporting of quantitative protein electrophoresis in australia and new zealand: a call for standardisation.
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BACKGROUND: The lack of guidelines on reporting standards for protein electrophoresis may have led to significant differences in reports from different laboratories. OBJECTIVE: To determine the extent of variation in reporting of protein electrophoresis results in Australia and New Zealand.
METHOD: Questionnaires were distributed to laboratories throughout Australia and New Zealand asking about protein electrophoresis practices and reporting. RESULTS: EXTENSIVE VARIATION WAS FOUND IN THE FOLLOWING REPORTING PRACTICES: (a) units for urine Bence Jones protein (BJP); (b) reporting absence of a paraprotein rather than a normal pattern; (c) numerical reporting of all protein fractions or only the paraprotein; (d) warning of possible inaccuracy in the serum immunoglobulin result of the paraprotein type; (e) co-migration of a paraprotein with a normal serum protein; (f) use of a confirmatory test when a known paraprotein is no longer detectable.
CONCLUSIONS: A working party should be established to make recommendations on the reporting of protein electrophoresis. Implementation of such recommendations should reduce both report variation between laboratories and the risk of misinterpretation of reports.
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Healthier lifestyle predicts higher circulating testosterone in older men: the Health In Men Study.
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OBJECTIVE: Circulating testosterone declines during male ageing, and low testosterone may predispose to ill health. We sought to determine whether greater participation in healthy behaviours predicted reduced risk of subsequent lower circulating testosterone in older men.
DESIGN: Cross-sectional analysis of a population-based follow-up study.
PARTICIPANTS: A total of 3453 men aged 65-83 years. MEASUREMENTS: Lifestyle score, a tally of eight prudent health-related behaviours, was determined during 1996-99. Early morning sera collected in 2001-04 were assayed for total testosterone, SHBG and LH. Free testosterone was calculated using mass action equations.
RESULTS: Mean (+/- SD) time between collection of lifestyle data and blood sampling was 5.7 +/- 0.9 years. Lifestyle score correlated with subsequent total testosterone (r = 0.06, P < 0.001) and SHBG (r = 0.07, P < 0.001), but not free testosterone (r = 0.03, P = 0.08) or LH (r = -0.03, P = 0.12). In multivariate analyses, higher lifestyle scores (4 and above) predicted reduced risk of total testosterone and SHBG in the lowest quartile of values. For the highest category (>or= 7), odds ratio (95% CI) for total testosterone and SHBG in the lowest quartile were 0.37 (0.18-0.77) and 0.26 (0.13-0.54), respectively. Lower lifestyle scores including and excluding body mass index predicted higher risk of total testosterone and SHBG in the lowest quartiles.
CONCLUSIONS: In men > 65 years old, higher lifestyle score reflecting greater engagement in healthy behaviours predicts higher subsequent total
testosterone and SHBG levels. This relationship appears cumulative and may reflect interaction between lifestyle and insulin sensitivity. Successfully promoting healthy behaviours in older men could ameliorate the age-related decline in circulating testosterone.

Publication Types: Research Support, Non-U.S. Gov't
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**Clinical and laboratory features of human Plasmodium knowlesi infection.**
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Background. Plasmodium knowlesi is increasingly recognized as a cause of human malaria in Southeast Asia but there are no detailed prospective clinical studies of naturally acquired infections.

Methods. In a systematic study of the presentation and course of patients with acute P. knowlesi infection, clinical and laboratory data were collected from previously untreated, nonpregnant adults admitted to the hospital with polymerase chain reaction-confirmed acute malaria at Kapit Hospital (Sarawak, Malaysia) from July 2006 through February 2008. Results. Of 152 patients recruited, 107 (70%) had P. knowlesi infection, 24 (16%) had Plasmodium falciparum infection, and 21 (14%) had Plasmodium vivax. Patients with P knowlesi infection presented with a nonspecific febrile illness, had a baseline median parasitemia value at hospital admission of 1387 parasites/µL (interquartile range, 6-222,570 parasites/µL), and all were thrombocytopenic at hospital admission or on the following day. Most (93.5%) of the patients with P knowlesi infection had uncomplicated malaria that responded to chloroquine and primaquine treatment. Based on World Health Organization criteria for falciparum malaria, 7 patients with P knowlesi infection (6.5%) had severe infections at hospital admission. The most frequent complication was respiratory distress, which was present at hospital admission in 4 patients and developed after admission in an additional 3 patients. P knowlesi parasitemia at hospital admission was an independent determinant of respiratory distress, as were serum creatinine level, serum bilirubin, and platelet count at admission (P < .002 for each). Two patients with knowlesi malaria died, representing a case fatality rate of 1.8% (95% confidence interval, 0.2%-6.6%).

Conclusions. Knowlesi malaria causes a wide spectrum of disease. Most cases are uncomplicated and respond promptly to treatment, but approximately 1 in 10 patients develop potentially fatal complications. Copyright 2009 by the Infectious Diseases Society of America. All rights reserved.
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**Candidaemia with uncommon Candida species: Predisposing factors, outcome, antifungal susceptibility, and implications for management.**
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The risk factors for and clinical features of bloodstream infection with uncommon Candida spp. (species other than C. albicans, C. glabrata, C. parapsilosis, C. tropicalis and C. krusei) are incompletely defined. To identify clinical variables associated with these species that might guide management, 57 cases of candidaemia resulting from uncommon Candida spp. were analysed in comparison with 517 episodes of Candida albicans candidaemia (2001-2004). Infection with uncommon Candida spp. (5.3% of candidaemia cases), as compared with C. albicans candidaemia, was significantly more likely to be outpatient-acquired than inpatient-acquired (15 of 57 vs. 65 of 517 episodes, p<0.01). Prior exposure to fluconazole was uncommon (n=1). Candida dubliniensis was the commonest species (n=22, 39%), followed by Candida guilliermondii (n=11, 19%) and Candida lusitaniae (n=7, 12%). C. dubliniensis candidaemia was independently associated with recent intravenous drug use (p<0.01) and chronic liver disease (p<0.03), and infection with species other than C. dubliniensis was independently associated with age <65 years (p<0.02), male sex (p<0.03) and human immunodeficiency virus infection (p<0.05). Presence of sepsis at diagnosis and crude 30-day mortality rates were similar for C. dubliniensis-related, non-C. dubliniensis-related and C. albicans-related candidaemia. Haematological malignancy was the commonest predisposing factor in C.
guilliermondii (n = 3, 27%) and C. lusitaniae (n = 3, 43%) candidaemia. The 30-day mortality rate of C. lusitaniae candidaemia was higher than the overall death rate for all uncommon Candida spp. (42.9% vs. 25%, not significant). All isolates were susceptible to amphotericin B, voriconazole, posaconazole, and caspofungin; five strains (9%) had fluconazole MIC values of 16-32 mg/L. Candidaemia due to uncommon Candida spp. is emerging among hospital outpatients; certain clinical variables may assist in recognition of this entity. copyright 2009 The Authors Journal compilation copyright 2009 European Society of Clinical Microbiology and Infectious Diseases.

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Population-based surveillance for scedosporiosis in Australia: Epidemiology, disease manifestations and emergence of Scedosporium aurantium infection.

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Australia-wide population-based surveillance for scedosporiosis identified 180 cases, with 118 (65.6%) cases of colonization and 62 (34.4%) cases of infection. Predisposing factors for isolation of Scedosporium spp. included chronic lung disease in 37.8% and malignancy in 21.7% of cases. Predictors of invasive disease (n = 62) included haematological stem cell transplantation (n = 7), leukaemia (n = 16) and diabetes mellitus (n = 8). Of 183 phenotypically-speciated isolates, 75 (41%) were Scedosporium prolificans (risk factors: haematologic cancer (n = 17), neutropaenia (n = 14)) and 108 (59%) had Scedosporium apiospermum/Pseudallescheria boydii phenotype [risk factor: diabetes
Scedosporium prolificans (p 0.01) and leukaemia (p 0.03) independently predicted death. Epidemiological and antifungal susceptibility profiles of Scedosporium aurantiacum (prevalence [greater-than-or-equal to]15.8%) and S. apiospermum were similar. No patient with S aurantiacum infection (n = 6) died. This is the first description of clinical features associated with S. aurantiacum.

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PMID:2009413478


Flexi-Seal continence device mimicking a pelvic collection.
Lee S, Welman CJ.
Publication Types: Letter
PMID:19414093


Results of a meta-analysis comparing the tolerability of lercanidipine and other dihydropyridine calcium channel blockers.
Makarounas-Kirchmann K, Glover-Koudounas S, et al. (Makarounas-Kirchmann) KMC Health Care, Frankston, Vic., Australia. (Makarounas-Kirchmann) Department of Epidemiology and Preventative Medicine, Monash University, Melbourne, Vic., Australia. (Glover-Koudounas) Medical and Scientific Affairs, Australia. (Ferrari) Department of Nephrology, Fremantle Hospital, School of Medicine and Pharmacology, Perth, WA, Australia. P. Ferrari, Department of Nephrology, Fremantle Hospital, School of Medicine and Pharmacology, Perth, WA, Australia. E-mail: paolo.ferrari@health.wa.gov.au
Background: Results from clinical studies suggest that the dihydropyridine calcium channel blocker (CCB) lercanidipine may be associated with a lower incidence of peripheral edema than are older dihydro-pyridine CCBs. Objective: The objective of the present study was to conduct a meta-analysis of published data from randomized controlled trials (RCTs) to assess the relative risk (RR) of dihydropyridine CCB-specific adverse events with lercanidipine versus the older dihydro-pyridine CCBs (first generation: amloidipine, felodipine, and nifedipine), and versus the other lipophilic dihydropyridine CCBs (second generation: lacidipine and manidipine). Methods: A systematic literature search (all years through August 11, 2008) of MEDLINE, EMBASE, and the Cochrane Library was conducted for English-language reports of single- or double-blind RCTs of [greater-than-or-equal to]4 weeks' duration that compared the tolerability of lercanidipine with other dihydropyridine CCBs in participants with mild (140-159/90-99 mm Hg) to moderate (160-179/100-109 mm Hg) hypertension. Results: Eight RCTs (6 used first-generation drugs, and 4 used second-generation drugs) met the criteria for inclusion. Efficacy outcomes for lowering blood pressure did not differ statistically between lercanidipine and either generation of medications. Compared with the first generation, lercanidipine was associated with a reduced risk of peripheral edema (52/742 with lercanidipine vs 88/627 with first generation; RR = 0.44 [95% CI, 0.31-0.62]), but not flushing or headache. The frequency of peripheral edema, flushing, and headache did not differ statistically between lercanidipine and the second-generation drugs. Study participants were less likely to withdraw from the RCTs because of peripheral edema (RR = 0.24 [95% CI, 0.12-0.47]) or any adverse event (RR = 0.51 [95% CI, 0.33-0.77]) when treated with lercanidipine rather than a drug from the first generation, but not when treated with lercanidipine rather than second-generation drugs. Conclusion: In this meta-analysis, lercanidipine was associated with a lower risk of peripheral edema and a lower risk of treatment withdrawal because of peripheral edema than were the first-generation, but not the second-generation, dihydropyridine CCBs. Copyright 2009 Excerpta Medica Inc. All rights reserved.
Publication Types: Review
PMID:2009651990
Determinants of lymph node yield in colorectal cancer: analysis of 10,082 patients from prospective Australian databases. 50.
Field K, Skinner I, et al.
(1) Biogrid Australia, Parkville, Victoria, Australia, (2) Western Hospital, Footscray, Victoria, Australia, (3) Royal Melbourne Hospital, Parkville, Victoria, Australia, (4) Fremantle Hospital, Fremantle, Western Australia, Australia, (5) University of Adelaide, Adelaide, South Australia, Australia, (6) Flinders University, Adelaide, South Australia, Australia, (7) Box Hill Hospital, Box Hill, Victoria, Australia.

Determinants of mortality in non-neutropenic ICU patients with candidaemia.
Marriott DJE, Geoffrey EG, et al.
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Canberra, ACT, Australia.
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Introduction: Candidaemia in critically-ill intensive care unit (ICU) patients is associated with high crude mortality. Determinants of mortality - particularly those amenable to potential modification - are incompletely defined. Methods: A nationwide prospective clinical and microbiological cohort study of all episodes of ICU-acquired candidaemia occurring in non-neutropenic adults was undertaken in Australian ICUs between 2001 and 2004. Multivariate Cox regression analyses were performed to determine independently significant variables associated with mortality. Results: 183 episodes of ICU-acquired candidaemia occurred in 183 patients during the study period. Of the 179 with microbiological data, Candida albicans accounted for 111 (62%) episodes and Candida glabrata, 32 (18%). Outcome data were available for 173: crude hospital mortality at 30 days was 56%. Host factors (older age, ICU admission diagnosis, mechanical ventilation and ICU admission diagnosis) and failure to receive systemic antifungal therapy were significantly associated with mortality on multivariate analysis. Among the subset who received initial fluconazole therapy (n = 93), the crude mortality was 52%. Host factors (increasing age and haemodialysis receipt), but not organism-(Candida species, fluconazole MIC), pharmacokinetic- (fluconazole dose, time to initiation), or pharmacodynamic-related parameters (fluconazole dose:MIC ratio) were associated with mortality. Process of care measures advocated in recent guidelines were implemented inconsistently: follow-up blood cultures were obtained in 68% of patients, central venous catheters removed within five days in 80% and ophthalmological examination performed in 36%. Conclusions: Crude mortality remains high in Australian ICU patients with candidaemia and is overwhelmingly related to host factors but not treatment variables (the time to initiation of antifungals or fluconazole pharmacokinetic and pharmacodynamic factors). The role and timing of early antifungal intervention in critically-ill ICU patients requires further investigation. copyright 2009 Marriott et al.; licensee BioMed Central Ltd. PMID:2009444369

The impact of body position on intra-abdominal pressure measurement: A multicenter analysis.
Cheatham ML, De Waele JJ, et al.
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Objective: Elevated intra-abdominal pressure (IAP) is a frequent cause of morbidity and mortality among the critically ill. IAP is most commonly measured using the intravesicular or "bladder" technique. The impact of changes in body position on the accuracy of IAP measurements, such as head of bed elevation to reduce the risk of ventilator-associated pneumonia, remains unclear., Design: Prospective, cohort study., Setting: Twelve international intensive care units., Patients: One hundred thirty-two critically ill medical and surgical patients at risk for intra-abdominal hypertension and abdominal compartment syndrome., Interventions: Triplicate intravesicular pressure measurements were performed at least 4 hours apart with the patient in the supine, 15[degrees], and 30[degrees]
head of bed elevated positions. The zero reference point was the mid-axillary line at the iliac crest.

Measurements and Main Results: Mean IAP values at each head of bed position were significantly different ($p < 0.0001$). The bias between IAPsupine and IAP15[degrees] was 1.5 mm Hg (1.3-1.7). The bias between IAPsupine and IAP30[degrees] was 3.7 mm Hg (3.4-4.0). Conclusions: Head of bed elevation results in clinically significant increases in measured IAP. Consistent body positioning from one IAP measurement to the next is necessary to allow consistent trending of IAP for accurate clinical decision making. Studies that involve IAP measurements should describe the patient's body position so that these values may be properly interpreted. (C) 2009 Lippincott Williams & Wilkins, Inc.


Pathophysiology of Abdominal aortic aneurysm relevant to improvements in patients' management.

Golledge J, Norman PE.

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Purpose of review: Abdominal aortic aneurysm (AAA) is being diagnosed more frequently in older patients due to the increased use of abdominal imaging and the rising average age of western populations. Currently the management of this condition has two important deficiencies: inadequate methods to identify AAAs at risk of progression and rupture and the current lack of effective nonsurgical therapies. In this review recent developments in identifying new diagnostic, prognostic and therapeutic strategies for AAA are discussed. Recent findings: There are growing number of animal and human association studies which have identified markers and strategies of potential value in improving identification, monitoring and treatment of AAA. Summary: Selective large prospective imaging, biomarker and intervention studies are now required to clearly demonstrate the value of new management pathways for AAA. copyright 2009 Wolters Kluwer Health | Lippincott Williams & Wilkins. Publication Types: Review PMID:2010043160


Defining pharmacokinetics for individual patient dosimetry in routine radiopeptide and radioimmunotherapy of cancer: Australian experience.

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Determination of individual pharmacokinetics in patients undergoing radiopharmaceutical therapy is essential to define critical normal organ dosimetry. Review of a 20 year single institution experience demonstrates practical methodology for routinely characterising pharmacokinetics in each patient and calculating safe, effective therapeutic activities predicated upon prescribed radiation absorbed doses to the critical organs. In particular the results achieved in over 100 unselected consecutive clinic patients treated with (131)I-rituximab radioimmunotherapy for relapsed/refractory non-Hodgkins lymphoma have matched the ORR of 75% and CR 50% achieved in formal phase II clinical trial. The low level of myelotoxicity was attributed to prospective dosimetry in each patient and prescribed dose of 0.75 Gy to whole body. Radiopeptide therapy of progressive neuroendocrine tumours with (177)Lu-octreotate, illustrates application of practical dosimetry using retrospective quantitative imaging to define individual pharmacokinetics. Further challenges of multimodality combination therapy using radionuclide cocktails, chemotherapy and antivascular therapy, which will perturb pharmacokinetics, will require creative dosimetric methodology for continued safe, effective clinical practice of therapeutic nuclear oncology.
Developments in non-surgical therapies for abdominal aortic aneurysm.
Golledge J, Dalman RL, et al.
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J. Golledge, Vascular Biology Unit, School of Medicine and Dentistry, James Cook University, Townsville, VIC 4811, Australia. E-mail: jonathan.golledge@jcu.edu.au
The introduction of ultrasound screening combined with the increasingly elderly population means that the number of small abdominal aortic aneurysms (AAAs) detected is expected to increase over the next decade. At present open or endovascular surgery are the only treatment options for AAA. In this mini-review we discuss the rationale and ongoing attempts to develop non-surgical therapies for AAA. copyright 2009 Bentham Science Publishers Ltd.
Publication Types: Short Survey
PMID:2009239168

Role of a LIF antagonist in LIF and OSM induced MMP-1, MMP-3, and TIMP-1 expression by primary articular chondrocytes.
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Cartilage degradation is mediated by matrix metalloproteinases (MMPs) and their inhibitors, tissue metalloproteinases (TIMPs), which are transcriptionally regulated by a variety of growth factors and cytokines. The levels of various MMPs as well as TIMPs have been shown to increase in response to certain cytokines. These include leukaemia inhibitory factor (LIF) and Oncostatin M (OSM), both of which have been detected in the synovial fluids of patients with rheumatoid arthritis (RA). However, the role of LIF and OSM in the regulation of various MMPs and TIMPs is still incompletely understood. The aims of this study were to examine the effects of LIF and OSM on MMP-1, MMP-3, and TIMP-1 production. In addition, the capacity of the LIF antagonist, MH35-BD, to block LIF and OSM induced MMP expression was examined. Primary chondrocytes, isolated from porcine metacarpophalangeal cartilage, were cultured in the presence and absence of LIF and OSM, with and without a predetermined concentration of the LIF antagonist. We analysed the levels of MMP-1, MMP-3 and TIMP-1 expression using qRT-PCR, Northern blot, and ELISA assays. The results indicate that LIF and OSM increase the expression of MMP-1, MMP-3, and TIMP-1 several fold. Furthermore their expression is reduced to basal levels in the presence of the LIF antagonist MH35-BD. copyright 2009 Elsevier Ltd. All rights reserved.
PMID:2009231277
Prevalence and predictors of osteopenia and osteoporosis in adults with Type 1 diabetes.

Hamilton EJ, Rakic V, et al.

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AIMS: To determine the prevalence and biochemical/hormonal determinants of osteopenia and osteoporosis in adults with Type 1 diabetes. METHODS: One hundred and two patients (52 female, 50 male) with Type 1 diabetes aged 20-71 years underwent cross-sectional assessment of biochemical/hormonal markers of bone metabolism, and bone mineral density (BMD) measurement at forearm, hip and spine using dual energy x-ray absorptiometry. BMD data were available for 102 age- and gender-matched population-based control subjects. RESULTS: After adjusting for age and body mass index (BMI), osteopenia and osteoporosis were more common at the spine in males with Type 1 diabetes than in control subjects (P = 0.030). In Type 1 males, after adjustment for age and BMI, BMD, T- and Z-scores at the hip, femoral neck and spine were lower compared with age-matched control subjects (P ≤ 0.048). Female Type 1 patients and control subjects had similar BMDs and T- and Z-scores at all sites. On multiple linear regression analysis, which adjusted for the natural logarithm of the sex hormone binding globulin concentration, smoking status and alcohol consumption, and (for women) menopausal status, each of BMI, serum ionized calcium and serum alkaline phosphatase (negatively) were independently associated with BMD at the hip and femoral neck in Type 1 diabetic subjects. CONCLUSIONS: Adult males with Type 1 diabetes have reduced bone density at the hip, femoral neck and spine when compared with age-matched control subjects. Impaired bone formation may occur in Type 1 diabetes.

Publication Types: Research Support, Non-U.S. Gov't
PMID:19125760

Antiplatelet therapy, Helicobacter pylori infection and complicated peptic ulcer disease in diabetes: the Fremantle Diabetes Study.

Schimke K, Chubb SA, et al.

University of Western Australia, School of Medicine and Pharmacology, Fremantle Hospital, Australia.

AIMS: To assess whether, based on its relationship with complications of peptic ulcer disease (PUD), directed Helicobacter pylori serological screening is justified in diabetic patients prior to commencement of antiplatelet therapy. METHODS: We analysed data from the longitudinal, community-based Fremantle Diabetes Study (FDS). The present substudy included (i) 1301 patients (91.2% of the total FDS sample; mean age 62.0 +/- 13.3 years, 49.5% male) with available sera from baseline assessment between 1993 and 1996, and (ii) a subset of 40 patients admitted to hospital for complicated PUD (bleeding and/or perforation) between baseline and end of June 2006. All hospital admissions for complicated PUD in the population of Western Australia were identified over the same period. Helicobacter pylori IgG antibodies were measured in all patients at baseline and in the subset at the FDS visit prior to hospital admission. RESULTS: Helicobacter pylori seropositivity was present in 60.6% of FDS patients at baseline and was independently associated with increasing age and non-Anglo-Celt/non-Asian ethnicity. There were 2.9 (95% confidence interval 2.1, 3.9) first admissions for complicated PUD per 1000 patient-years, an incidence more than seven times that in the local general population. Independent baseline predictors of hospital admission were increasing age, serum urea, non-aspirin anticoagulant therapy, sulphonylurea therapy, peripheral arterial disease and diabetic retinopathy, but not aspirin use, H. pylori seropositivity or their interaction. CONCLUSIONS: There are diabetes-specific risk factors for complicated PUD, including sulphonylurea use and vascular complications. Knowledge of H. pylori serological status does not predict complicated PUD in diabetes regardless of use of antiplatelet therapy.

Publication Types: Research Support, Non-U.S. Gov't
PMID:19125763
Severe hypoglycaemia and cognitive impairment in older patients with diabetes: the Fremantle Diabetes Study.
Bruce DG, Davis WA, et al.
School of Medicine and Pharmacology, University of Western Australia, Fremantle Hospital, PO Box 480, Fremantle, WA, 6959, Australia. dbruce@cyllene.uwa.edu.au
AIMS/HYPOTHESIS: The aim was to investigate the relationship between severe hypoglycaemia and cognitive impairment in older patients with diabetes. METHODS: A sample of 302 diabetic patients aged >=70 years was assessed for dementia or cognitive impairment without dementia in 2001-2002 and a subsample of non-demented patients (n = 205) was followed to assess cognitive decline. A history of severe hypoglycaemia was determined from self-reports, physician assessments and records of health service use for hypoglycaemia (HSH). Prospective HSH was determined up to 2006. Data analysis, including multiple logistic and Cox regression models, was used to determine whether: (1) there were cross-sectional associations between hypoglycaemia and cognitive status, (2) historical hypoglycaemia predicted cognitive decline, and (3) baseline cognitive status predicted subsequent HSH. RESULTS: There were significant cross-sectional associations between both cognitive impairment and dementia and hypoglycaemia. Independent risk factors for future HSH included dementia (hazard ratio 3.00, 95% CI 1.06-8.48) and inability to self-manage medications (hazard ratio 4.17, 95% CI 1.43-12.13). However, there were no significant associations between historical hypoglycaemia, incident HSH and cognitive decline. CONCLUSIONS/INTERPRETATION: Dementia is an important risk factor for hypoglycaemia requiring health service utilisation. We found no evidence that hypoglycaemia contributes to cognitive impairment in older patients with diabetes.
PMID:19575177

Comment on "drug-induced thrombocytopenia: an updated systematic review".
De Keulenaer BL, Cheah CY.
Fremantle Hospital, Intensive Care, Fremantle, Western Australia, Australia.
PMID:19591534

Cardiac arrhythmia or movement artefact?[comment].
Goudie AM, Patterson H, et al.
Publication Types: Comment Letter
PMID:19254319

Are seizures in the setting of sleep deprivation provoked?: 1.117.
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Publication Types: Abstracts from the 2009 Annual Meeting of the American Epilepsy Society: Clinical Epilepsy

Knuiman MW, Hung J, et al.
Background: To investigate the prognostic importance of the metabolic syndrome (MetS) on incident cardiovascular disease (CVD). Design: Prospective cohort study. Methods: The study was based on 10-year follow-up of 3041 men and women aged 25-84 years without CVD or diabetes who participated in the 1994/1995 Busselton Health Survey. Hazards ratio (HRs) from Cox regression models were used to describe the effect of the MetS as a dichotomous classification and as the number of risk components on incident coronary heart disease (CHD), stroke and all CVD events.

Results: All cardiovascular and metabolic risk factors studied showed a strong association with the number of MetS risk components. The age-adjusted and sex-adjusted HR for the MetS was 1.70 (95% confidence interval: 1.15-2.51) for incident CHD but this was reduced to almost unity after adjustment for cardiovascular risk factors or the homoeostasis model assessment measure of insulin resistance. However, the number of MetS risk components remained significant (P<0.01) with those having 3+ risk components with a three-fold increase in risk compared with those with no risk components (adjusted HR: 3.59, 95% confidence interval: 1.43-8.99).

Conclusion: Consideration of the number of MetS risk components seems to be more informative than the (dichotomous) MetS classification when determining risk in clinical practice. Identification of people without any MetS risk components is clinically valuable, as these people seem to have a substantially reduced risk of developing CHD.


Matrix metalloproteinase-2 gene variants and abdominal aortic aneurysm.
Smallwood L, Warrington N, et al.
School of Surgery, University of Western Australia, Fremantle Hospital, Fremantle, WA 6959, Australia.

OBJECTIVE: To investigate associations between two polymorphisms of the matrix metalloproteinase-2 gene (MMP2) and the incidence and progression of abdominal aortic aneurysm (AAA). METHODS: Cases and controls were recruited from a trial of screening for AAAs. The association between two variants of MMP2 (-1360C>T, and +649C>T) in men with AAA (n=678) and in controls (n=659) was examined using multivariate analyses. The association with AAA expansion (n=638) was also assessed. RESULTS: In multivariate analyses with adjustments for multiple testing, no association between either SNP and AAA presence or expansion was detected. CONCLUSION: MMP2 -1360C>T and +649C>T variants are not risk factors for AAA.

PMID:19515587


Genetics of hereditary hemochromatosis: A clinical perspective.
Gan EK, Trinder D, et al.
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Hereditary hemochromatosis due to homozygosity for the C282Y mutation in the HFE gene product is the most common autosomal recessive genetic disorder in populations of northern European descent, where it attains a maximum prevalence of approximately one in 200. Cross-sectional and longitudinal studies have revealed that clinically significant iron-overload disease develops in at least 28% of male and 1% of female HFE C282Y homozygotes. The relatively low clinical penetrance is largely unexplained. Current evidence suggests a limited role for digenic inheritance of mutations in iron homeostasis genes in modifying the penetrance of hemochromatosis. Male gender is a strong genetic
factor, promoting expression of clinical disease. Dietary intake of alcohol and noncitrus fruit may also act as important environmental modifiers of penetrance. With genetic analyses becoming simpler to perform, new genetic modifiers of hepatic iron loading and liver fibrogenesis are likely to be forthcoming. copyright 2009 Expert Reviews Ltd.

Publication Types: Review
PMID:2009481441

Testosterone and growth hormone in older men: For better or for worse?
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B.B. Yeap, Department of Endocrinology and Diabetes, Fremantle Hospital, Alma Street, Fremantle, WA 6160, Australia. E-mail: byeap@cyllene.uwa.edu.au
In men, testosterone and IGF1 levels decline with increasing age, and lower levels of these hormones are associated with poorer health. A recent, randomized clinical trial demonstrates the additive effects of testosterone and growth hormone supplementation to increase lean body mass, reduce fat mass and improve muscle strength in older men. These findings highlight the interaction between these two hormones and provide a model for further evaluation of combined therapy to explore other end points, such as cardiovascular risk. copyright 2009 Expert Reviews Ltd.
PMID:2009475718

Resolution of large intra-aortic thrombus following anticoagulation therapy.
Iyer AP, Sadasivan D, et al.
Department of Cardiothoracic Surgery, Fremantle Hospital, Alma Street, Fremantle, WA, Australia. anandcvts@hotmail.com
PMID:19193357

Heparin-free hemodialysis with blood transfusion [Hemodialysis Abstracts from the 2nd Congress of International Society for Hemodialysis 2009].
Yung H.
Fremantle Hospital, Western Australia, Australia

Rapid refilling ultrafiltration profile in hemodialysis [Hemodialysis Abstracts from the 2nd Congress of International Society for Hemodialysis 2009 ].
Yung H.
Fremantle Hospital, Western Australia, Australia

Blood Transfusion in Heparin-Free Hemodialysis.
Yung J.
Renal Unit, Fremantle Hospital, Fremantle, Australia

HFE C282Y/H63D compound heterozygotes are at low risk of hemochromatosis-related morbidity.
Gurrin LC, Bertalli NA, et al.
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The risk of hemochromatosis-related morbidity is unknown among HFE compound heterozygotes (C282Y/H63D). We used a prospective population-based cohort study to estimate the prevalence of elevated iron indices and hemochromatosis-related morbidity for compound heterozygotes. In all, 31,192 subjects of northern European descent were genotyped for HFE C282Y and H63D. An HFE-genotype stratified random sample of 1,438 subjects, followed for an average of 12 years to a mean age of 65 years, completed questionnaires and gave blood. Clinical examinations were blinded to HFE genotype. A total of 180 (84 males) clinically examined C282Y/H63D participants were compared with 330 (149 males) controls with neither HFE mutation; 132 (65 males) and 270 (122 males), respectively, had serum iron measures at both timepoints. Mean serum ferritin (SF) and transferrin saturation (TS) were significantly greater for male and female compound heterozygotes than for wild-types at baseline and follow-up (all P < 0.02) except for females who were premenopausal at baseline, where SF was similar in both genotype groups. For subjects with serum measures from both baseline and follow-up, mean SF and TS levels did not change significantly for men or for postmenopausal women, but for premenopausal women SF levels increased from 43 to 109 mug/L for compound heterozygotes and from 35 to 64 mug/L for wild-types (both P < 0.001). Male and female compound heterozygotes had a similar prevalence of hemochromatosis-related morbidity to wild-types. One of 82 males and zero of 95 females had documented iron overload-related disease. Conclusion: For male compound heterozygotes, mean iron indices do not change during middle age but for female compound heterozygotes menopause results in increased mean SF. Although compound heterozygotes might maintain elevated iron indices during middle age, documented iron overload-related disease is rare. Copyright copyright 2009 by the American Association for the Study of Liver Diseases.

PMID:2009602701


Divergent adaptation of hepatitis C virus genotypes 1 and 3 to human leukocyte antigen-restricted immune pressure.
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Many hepatitis C virus (HCV) infections worldwide are with the genotype 1 and 3 strains of the virus. Cellular immune responses are known to be important in the containment of HCV genotype 1 infection, and many genotype 1 T cell targets (epitopes) that are presented by host human leukocyte antigens (HLAs) have been identified. In contrast, there is almost no information known about the equivalent responses to genotype 3. Immune escape mechanisms used by HCV include the evolution of viral polymorphisms (adaptations) that abrogate this host-viral interaction. Evidence of HCV adaptation to HLA-restricted immune pressure on HCV can be observed at the population level as viral polymorphisms associated with specific HLA types. To evaluate the escape patterns of HCV genotypes 1 and 3, we assessed the associations between viral polymorphisms and specific HLA types from 187 individuals with genotype 1a and 136 individuals with genotype 3a infection. We identified 51 HLA-associated viral polymorphisms (32 for genotype 1a and 19 for genotype 3a). Of these putative viral adaptation sites, six fell within previously published epitopes. Only two HLA-associated viral polymorphisms were common to both genotypes. In the remaining sites with HLA-associated polymorphisms, there was either complete conservation or no significant HLA association with viral polymorphism in the alternative genotype. This study also highlights the diverse mechanisms by which viral evasion of immune responses may be achieved and the role of genotype variation in these processes. Conclusion: There is little overlap in HLA-associated polymorphisms in the nonstructural proteins of HCV for the two genotypes, implying differences in the cellular immune pressures acting on these viruses and different escape profiles. These findings have implications for future therapeutic strategies to combat HCV infection, including vaccine design. Copyright © 2009 by the American Association for the Study of Liver Diseases.

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Clotting factor replacement and recovery from snake venom-induced consumptive coagulopathy.

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Introduction: Using clotting factors (fresh frozen plasma and/or cryoprecipitate) to treat snake venom-induced consumptive coagulopathy (VICC) is controversial. We aimed to determine if factor
replacement after antivenom is associated with an earlier return of coagulation function. Methods: We retrospectively analysed VICC cases due to brown snake (genus Pseudonaja), tiger snake (Notechis, Tropidechis, and Hoplocephalus), and taipan (Oxyuranus) envenoming. Recovery of international normalized ratio (INR)/prothrombin time (PT) was compared between patients who did not receive factor replacement and those who did, and between patients who received factor replacement [less-than or equal to] 4 h of commencing antivenom and those who received factor replacement later or not at all. Results: There was no significant difference between cases receiving clotting factors and cases that did not, however in 21 cases having factor replacement within 4 h, the median time to coagulation recovery was 4.6 h (interquartile range [IQR] 3.5-8.8), versus 9.5 h (IQR 7.3-13) in 106 cases who had clotting factors later or not at all (P < 0.001). No serious adverse effects attributed to clotting factors were recorded. Recovery by 6 h after starting antivenom was also more likely in those who were younger, in tiger snake envenoming, and where the interval between bite and starting antivenom was longer. The initial dose of antivenom did not appear to influence the likelihood of recovery at 6 h.

Conclusion: Early factor replacement after antivenom is associated with earlier improvement of coagulation function. Randomised controlled clinical trials to determine the efficacy and safety of factor replacement for VICC after venom neutralisation are required. copyright 2009 Springer-Verlag.

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What is normal intra-abdominal pressure and how is it affected by positioning, body mass and positive end-expiratory pressure?

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PURPOSE: To describe what is defined as normal intra-abdominal pressure (IAP) and how body positioning, body mass index (BMI) and positive end-expiratory pressure (PEEP) affect IAP monitoring. METHODS: A review of different databases was made (Pubmed, MEDLINE (January 1966-June 2007) and EMBASE.com (January 1966-June 2007)) using the search terms of "IAP", "intra-abdominal hypertension" (IAH), "abdominal compartment syndrome" (ACS), "body positioning", "prone positioning", "PEEP" and "acute respiratory distress syndrome" (ARDS). Prior to 1966, we selected older articles by looking at the reference lists displayed in the more recent papers.

RESULTS: This review focuses on the concept that the abdomen truly behaves as a hydraulic system. The definitions of a normal IAP in the general patient population and morbidly obese patients are reviewed. Subsequently, factors that affect the accuracy of IAP monitoring, i.e., body position (head of bed elevation, lateral decubitus and prone position) and PEEP, are explored. CONCLUSION: The abdomen behaves as a hydraulic system with a normal IAP of about 5-7 mmHg, and with higher baseline levels in morbidly obese patients of about 9-14 mmHg. Measuring IAP via the bladder in the supine position is still the accepted standard method, but in patients in the semi-recumbent position (head of the bed elevated to 30 degrees and 45 degrees ), the IAP on average is 4 and 9 mmHg, respectively, higher. Future research should be focused on developing and validating predictive equations to correct for supine IAP towards the semi-recumbent position. Small increases in IAP in stable patients without IAH, turned prone, have no detrimental effects. The role of prone positioning in the unstable patient with or without IAH still needs to be established.

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A successful, coordinated approach to healthcare worker influenza vaccination in an area health service.

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Fluoroquinolone-induced immune thrombocytopenia: a report and review.
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Fluoroquinolones are emerging but underrecognized cause of drug-induced thrombocytopenia. Due to their broad spectrum they are often used in empirical treatment of febrile neutropenic, thrombocytopenic patients following myelosuppressive chemotherapy. They are associated with a range of immunohaematopathology. A 76-year-old male developed severe thrombocytopenia following treatment with ciprofloxacin on two occasions for community-acquired pneumonia. The temporal association, response to dechallenge, dramatic response to rechallenge and exclusion of other causes combined with detection of platelet-reactive antibodies of the immunoglobulin G class against glycoprotein IIb/IIIa following ciprofloxacin rechallenge makes causality probable. We present a brief review of immunohaematopathology associated with fluoroquinolones and draw attention to the structural similarity between quinolones and quinine to explore potential mechanisms for the phenomenon. Fluoroquinolones can induce drug-dependent, platelet-reactive antibodies causing complement-mediated destruction of platelets. The underlying mechanism to explain this is unclear; however, we hypothesize that the chemical similarities shared with quinine may be contributory. When using these agents clinicians should be aware of the possibility of drug-induced thrombocytopenia or thrombotic thrombocytopenic purpura.
PMID:19769684

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Sublingual immunotherapy can be safely administered in selected patients with severe asthma: 15.
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A case of Takayasu's arteritis and a difficult treatment decision: 63.
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Serum testosterone levels correlate with haemoglobin in middle-aged and older men.
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Background: Lower testosterone levels are associated with anaemia in older men and women. The relation between testosterone and haemoglobin (Hb) in younger and middle-aged men is less well defined. The aim of the study was to examine the association between testosterone and Hb levels in men spanning middle to older ages. Methods: A cross-sectional analysis of 492 men aged 30.7-94.5 years from the Busselton Health Survey, Western Australia, was carried out. Haemoglobin (Hb), early-morning serum total testosterone and sex hormone-binding globulin (SHBG) were measured. Free testosterone was calculated using mass action equations. Results: Haemoglobin correlated to total and free testosterone concentrations (r = 0.13, P = 0.003 and r = 0.20, P < 0.001, respectively). Hb and SHBG were inversely correlated (r = -0.14, P = 0.001). Hb increased across lowest to highest quartiles of total testosterone (P = 0.02) and free testosterone (P < 0.001), but not SHBG. After adjusting for age, waist circumference, smoking status, alcohol consumption, renal function and ferritin, total testosterone was associated with Hb (beta = 0.037, P = 0.003) as was free testosterone (beta = 2.32, P < 0.001), whereas SHBG was not associated. Conclusion: Testosterone concentration modulates Hb levels in community-dwelling men across a wide age range. Further studies are needed to clarify implications of this association between testosterone and Hb in men. copyright 2009 Royal Australasian College of Physicians.
PMID:2009465640
**Phantom testing of beta probe in Western Australia.**
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**Severe hypercalcaemia in sarcoidosis with musculoskeletal involvement.**
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**Managing aggression in the emergency department: promoting an interdisciplinary approach.**
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Incidents of aggression are frequent occurrences in hospitals, particularly the emergency department. Aggression creates instability in the environment, impacts on patient care outcomes and leads to increased levels of stress in staff. Regular exposure to aggression in the workplace can have detrimental effects on health professionals' ongoing quality of life. The emergency department is a gateway to care and is heavily populated 24h a day. Therefore, it is essential that all health professionals are confident and well prepared to manage aggression. Based upon a review of the literature this paper outlines the causes of aggression and provides an interdisciplinary action plan for intervening with aggressive patients in the emergency department. The importance of interdisciplinary ownership and the well planned management of aggression are outlined. When well managed, the impact of aggression can be limited. Stability in the emergency department ensures that health professionals can be responsive to the community's needs for emergency care. This leads to the provision of effective and timely care and a stable work environment for all health professionals. PMID:19341998

**Long-term efalizumab therapy for patients with moderate-to-severe, chronic plaque psoriasis: Results from an Australian expanded access program.**
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Background: Psoriasis is a chronic skin disease that can impact heavily on a patient's well-being. Efalizumab, a unique, targeted, biological therapy, has demonstrated efficacy in treating moderate-to-severe, chronic plaque psoriasis with ≤36 months of continuous therapy. The objective of this Extended Access Program (EAP) was to evaluate further the benefit of efalizumab as long-term therapy in a real-world clinical setting. Methods: After an initial conditioning dose of efalizumab (0.7 mg/kg subcutaneously), a weekly dose of efalizumab (1.0 mg/kg) was administered for [≤]21 months. Patients with reduced Psoriasis Area and Severity Index (PASI) scores ([≥]50%, or a score [≤]8) at month 3 entered the long-term maintenance treatment period. Results: In total, 101 patients (>18 years) with severe plaque psoriasis enrolled on the EAP, of these 93 (92.1%) met all the inclusion criteria. After 3 months of treatment, 84/101 (83.2%) patients had evaluable data and entered the maintenance period. After 3 months, 57/84 (67.9%) patients had achieved PASI-50. Using an intent-to-treat analysis, after 21 months of treatment, PASI-75 and PASI-50 were achieved by 43/101 (42.6%) and 69/101 (68.3%) of patients, respectively. Efalizumab was generally well tolerated during the 21 months of continuous therapy. Conclusion: Efalizumab, 1.0 mg/kg/week, is effective and well tolerated in a 'real world' clinical setting, providing enduring reduction of psoriasis symptoms for up to 21 months. copyright 2009 The International Society of Dermatology.


Photodynamic therapy with methyl aminolevulinate for primary nodular basal cell carcinoma: Results of two randomized studies.
Background: Data suggest that photodynamic therapy using topical methyl aminolevulinate (MAL PDT) may be a noninvasive alternative to excisional surgery for nodular basal cell carcinoma (BCC). In the studies described here, we investigated the histologic response, tolerability, and cosmetic outcome with MAL PDT for primary nodular BCC (≤ 5 mm in depth). Methods: Two multicenter, randomized, double-blind studies with similar design and procedures were conducted. After surface debridement and minor tumor debulking, MAL cream 160 mg/g (66 patients with 75 lesions) or placebo cream (65 patients with 75 lesions) was applied for 3 h, followed by illumination with broad-spectrum red light (75 J/cm², 570-670 nm). This was repeated 7 days later. Lesions with a partial response (≥ 50% reduction in greatest diameter) at 3 months were re-treated (21%). Treatment sites were excised at 3 months (clinical nonresponders) or 6 months (clinical responders) after the last treatment. Results: Histologically verified lesion complete response rates were higher with MAL PDT than with placebo [73% (55/75) vs. 27% (20/75)]. Treatment was most effective for facial lesions (89% complete response). Cosmetic outcome was good or excellent in 98% of evaluable, completely responding lesions treated with MAL PDT. Conclusion: Although longer follow-up studies are required, these promising data indicate the potential of topical MAL PDT as a noninvasive treatment alternative for nodular BCC.

A genetic polymorphism in transforming growth factor beta receptor-2 is associated with serum osteopontin.

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Osteopontin (OPN) is a secreted glycoprotein demonstrated to play an important role in inflammation. Transforming growth factor beta and a related signalling pathway have been implicated in control of OPN secretion. We examined the relationship between transforming growth factor beta receptor-1 and -2 (TGFBR1 and 2) single nucleotide polymorphisms (SNP) and serum OPN in 296 men from the Health in Men Study. Serum concentrations of OPN and 58 SNPs for TGFBR1 and 2 were assessed. One SNP in TGFBR2 was associated with serum OPN (TGFBR2 g.20690C>T, SNP ID rs4522809, \( P = 0.0007 \)) after adjusting for multiple testing. This study suggests that polymorphism in TGFBR2 are associated with altered secretion of OPN, supporting a role for transforming growth factor beta in OPN production. copyright 2009 Blackwell Publishing Ltd.

Are declining testosterone levels a major risk factor for ill-health in aging men?
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As men grow older, testosterone levels fall, with a steeper decline in unbound or free testosterone compared with total testosterone concentrations. Lower testosterone levels have been associated with poorer cognitive function, and with impaired general and sexual health in aging men. Recently, lower testosterone levels have been linked with metabolic syndrome and type II diabetes, both conditions associated with cardiovascular disease, and shown to predict higher overall and cardiovascular-related mortality in middle-aged and older men. However, reverse causation has to be considered, as systemic illness may result in reduced testosterone levels. Thus, the strength of these associations and the likely direction of causation need to be carefully considered. Furthermore, these conditions may overlap, for example aging, lower testosterone levels, erectile dysfunction and cardiovascular disease are interrelated. Cross-sectional and longitudinal observational studies may be informative. However, ultimately randomized controlled trials of testosterone therapy are needed to clarify its role in the maintenance of general and sexual health in aging men. Testosterone therapy should be considered in hypogonadal men who meet rigorous criteria for the diagnosis of androgen deficiency. Additional consideration should be given to designing and testing interventions that may prevent or ameliorate the age-related decline in testosterone levels in men.

PMID:19037223

The mindful process to care or not to care.
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Effects of exercise on hepcidin response and iron metabolism during recovery.
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Urinary hepcidin, inflammation, and iron metabolism were examined during the 24 hr after exercise. Eight moderately trained athletes (6 men, 2 women) completed a 60-min running trial (15-min warm-up at 75-80% HRpeak + 45 min at 85-90% HRpeak) and a 60-min trial of seated rest in a randomized, crossover design. Venous blood and urine samples were collected pretrial, immediately posttrial, and at 3, 6, and 24 hr posttrial. Samples were analyzed for interleukin-6 (IL-6), C-reactive protein (CRP), serum iron, serum ferritin, and urinary hepcidin. The immediate postrun levels of IL-6 and 24-hr postrun levels of CRP were significantly increased from baseline (6.9 and 2.6 times greater, respectively) and when compared with the rest trial (p [less-than or equal to] .05). Hepcidin levels in the run trial after 3, 6, and 24 hr of recovery were significantly greater (1.7-3.1 times) than the pre- and immediate postrun levels (p [less-than or equal to] .05). This outcome was consistent in all participants, despite marked variation in the magnitude of rise. In addition, the 3-hr postrun levels of hepcidin were significantly greater than at 3 hr in the rest trial (3.0 times greater, p [less-than or equal to] .05). Hepcidin levels continued to increase at 6 hr postrun but failed to significantly differ from the rest trial (p = .071), possibly because of diurnal influence. Finally, serum iron levels were significantly increased immediately postrun (1.3 times, p [less-than or equal to] .05). The authors concluded that high-intensity exercise was responsible for a significant increase in hepcidin levels subsequent to a
Elevated serum cytokines during human anaphylaxis: Identification of potential mediators of acute allergic reactions.
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Background: Anaphylaxis is generally unanticipated and requires emergency management. Therefore, the biological mediators in human beings have been difficult to define. Objective: Our aim was to identify cytokines and chemokines whose concentrations increase during anaphylaxis in human beings and to determine how each correlates with severity. Methods: We measured the concentrations of potential mediators, including cytokines, chemokines, mast cell tryptase (MCT), and histamine, over 3 time points in 76 patients presenting to emergency departments with anaphylaxis and correlated these with a global severity scale, hypotension, and hypoxia. Results: IL-2, IL-6, IL-10, TNF receptor I, MCT, and histamine were significantly elevated in patients with severe reactions (n = 36) compared with moderate reactions (n = 40) and healthy controls. Histamine levels peaked at emergency department arrival, whereas other mediators peaked later. IL-4, IL-5, IL-13, IFN-gamma, and TNF-alpha were marginally elevated in severe reactions compared with healthy controls but did not correlate with reaction severity. Severe reactions tended to be either hypotensive (n = 19) or hypoxemic (n = 12). Levels of IL-6, IL-10, TNF receptor I, MCT, and histamine correlated with hypotension. No mediator correlated with hypoxemia or other respiratory features. Conclusion: This study confirms that the concentrations of a number of cytokines are elevated in blood during anaphylaxis in human beings and that some correlate with the presence of hypotension. Others were only marginally elevated within a concentration range that available assays do not reliably detect. During respiratory reactions, mediators may be largely confined to the airways so that blood concentrations do not reflect activity. copyright 2009 American Academy of Allergy, Asthma & Immunology.

PMID:2009634811
Dementia-related healthcare planning requires accurate information on dementia patient characteristics and hospitalization trends at a population level. This population-based retrospective cohort study was designed to evaluate factors associated with total hospital length-of-stay (tLOS) in the last year of life (1990-2005) in Western Australians with dementia. Using linked hospital and death records, 29,884 dementia cases were identified. The average tLOS in the last year of life for all cases was 31.8 days. tLOS was longer for vascular dementia than Alzheimer's disease (41 versus 28 days; Rate Ratio (RR) 1.4; 95% CI 1.3-1.6). After multivariate adjustment, tLOS was longer for males than females (RR 1.4; 95% CI 1.3-1.4); longer for remote (RR 1.7; 95% CI 1.4-2.0) and very remote (RR 3.0; 95% CI 2.4-3.9) compared to metropolitan areas; and shorter with increasing age. 62% of admissions were emergency admissions. "Problems accessing alternative medical facilities" and "problems related to care provider dependency" accounted for a total of 16.4% of all bed days. In conclusion, people with dementia spend a considerable period of time in the hospital during their last year of life. Consideration of geographic isolation and accessibility to non-hospital facilities in dementia-related healthcare planning may liberate in-patient beds for more elective and acute care admissions. (PsycINFO Database Record (c) 2009 APA, all rights reserved) (journal abstract).


**Removal of the well-fixed hip resurfacing acetabular component. A simple, bone preserving technique.**
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Removal of the acetabular component of a hip resurfacing prosthesis is occasionally necessary for infection, malposition, metal sensitivity, wear, or as a necessary part of a femoral revision. Extraction of a well-fixed acetabular component can be technically demanding as it is often extremely well integrated into host bone and can result in catastrophic bone loss or fracture. We present an undescribed, simple technique that enables use of the Explant system (Zimmer, Warsaw, Ind) to remove the component with minimal bone loss and reduce fracture risk. Bone stock is therefore preserved for subsequent cup reimplantation. copyright 2009.

PMID:2009128987


**Comparison of two intraoperative assessment methods for injuries to the ankle syndesmosis. A cadaveric study.**
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BACKGROUND: Intraoperative stress testing is required for the detection of syndesmotic injury following an ankle fracture. The present study compared two stress tests for the detection of syndesmotic injury. METHODS: A true mortise radiograph of the ankle was made for fourteen cadaver joints. Specimens were randomized into two groups to simulate ligament and syndesmotic injury on the basis of the Danis-Weber classification system. In the first group, the anterior inferior tibiofibular ligament was divided first (Weber B(r)), followed sequentially by division of the interosseous membrane (Weber C) and the deltoid ligament. In the second group, the deltoid ligament was divided first, followed by the anterior inferior tibiofibular ligament. Radiographs were made at each stage with
use of two methods of stressing the ankle mortise: (1) external rotation of the foot with an external moment of 7.5 Nm, and (2) application of a lateral force of 100 N. Tibiofibular overlap, tibiofibular clear space, and medial clear space were measured. RESULTS: Lateral stress produced a significantly greater increase in the tibiofibular clear space than did the external rotation test for Weber C injuries and Weber C plus deltoid ligament injuries. A greater increase in the tibiofibular clear space was noted during the lateral stress test when both the deltoid and the anterior inferior tibiofibular ligament had been sectioned (p < 0.05). The external rotation stress test produced a significant increase in the medial clear space in the presence of isolated anterior inferior tibiofibular ligament and deltoid ligament injuries (p < 0.05). CONCLUSIONS: For the detection of syndesmotic instability at the site of ankle fractures on stress radiographs, the lateral stress test appeared to be superior to the external rotation stress test in this cadaver model.

PMID:19884439

Lower testosterone levels predict incident stroke and transient ischemic attack in older men.
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CONTEXT: Lower circulating testosterone concentrations are associated with metabolic syndrome, type 2 diabetes, carotid intima-media thickness, and aortic and lower limb arterial disease in men. However, it is unclear whether lower testosterone levels predict major cardiovascular events.

OBJECTIVE: We examined whether lower serum testosterone was an independently significant risk factor for symptomatic cerebrovascular events in older men. DESIGN: This was a prospective observational study with median follow-up of 3.5 yr. SETTING: Community-dwelling, stroke-free older men were studied. PARTICIPANTS: A total of 3443 men at least 70 yr of age participated in the study. MAIN OUTCOME MEASURES: Baseline serum total testosterone, SHBG, and LH were assayed. Free testosterone was calculated using mass action equations. Incident stroke or transient ischemic attack (TIA) was recorded. RESULTS: A first stroke or TIA occurred in 119 men (3.5%). Total and free testosterone concentrations in the lowest quartiles (<11.7 nmol/liter and <222 pmol/liter) were associated with reduced event-free survival (P = 0.014 and P = 0.01, respectively). After adjustment including age, waist-hip ratio, waist circumference, smoking, hypertension, dyslipidemia, and medical comorbidity, lower total testosterone predicted increased incidence of stroke or TIA (hazard ratio = 1.99; 95% confidence interval, 1.33-2.99). Lower free testosterone was also associated (hazard ratio = 1.69; 95% confidence interval, 1.15-2.48), whereas SHBG and LH were not independently associated with incident stroke or TIA. CONCLUSIONS: In older men, lower total testosterone levels predict increased incidence of stroke or TIA after adjusting for conventional risk factors for cardiovascular disease. Men with low-normal testosterone levels had increased risk. Further studies are warranted to determine whether interventions that raise circulating testosterone levels might prevent cerebrovascular disease in men.

PMID:19351733

A predominantly left upper limb sensory neuronopathy as a manifestation of a metastatic neuroendocrine malignancy.
Lim A, Scriven A, et al.
Department of Neurology, Fremantle Hospital, Alma Street, Fremantle, Western Australia 6160, Australia.

An 83-year-old woman presented with a predominantly left upper limb sensory ganglionopathy. She was found to have metastatic, poorly differentiated, neuroendocrine malignancy. Anti-neuronal antibodies were not detected.

PMID:19297166
The clinical significance of peripheral blood eosinophilia in primary biliary cirrhosis (PBC). Ayonrinde OT, Tan J, et al. Department of Gastroenterology, Fremantle Hospital, WA

One year mortality after hospitalisation for acute upper gastrointestinal bleeding and hip fracture is similar. Ayonrinde OT, Tan Y, et al. Fremantle Hospital, Fremantle, WA, School of Medicine and Pharmacology, University of Western Australia, Perth, Western Australia

Once-weekly encapsulated magnesium sulfate—an effective, new strategy for the management of chronic constipation. Barwood NT, Walker S, et al. Fremantle Hospital, Fremantle, Australia

Inflammation increases non-transferrin bound iron uptake by hepatocytes. Herbison CE, Delima RD, et al. University of Western Australia, Fremantle Hospital, Fremantle, Western Australia

Randomised, double-blinded, placebo-controlled study of VSL#3 versus placebo in the maintenance of remission in Crohn’s disease. Peddi P, Ombiga J, et al. (1)Centre for Inflammatory Bowel Diseases, Fremantle Hospital, WA,, (2)School of Medicine and Pharmacology, UWA, Fremantle Hospital, WA,, (3)Flinders Medical centre, SA

A population based study of gastric dysplasia in a western population. Raftopoulos SC, Kumarasinghe MP, et al. Departments of Gastroenterology and Hepatology Sir Charles Gairdner, Royal Perth and Fremantle Hospitals and PathWest Laboratory Medicine

Characteristics of patients with idiopathic acute pancreatitis at a tertiary referral hospital. Studd CR, Ayonrinde OT, et al. Fremantle Hospital, WA

A comparison of pegylated interferon (Peg IF) alfa 2a versus 2b, in combination with ribavirin, in routine clinical practice. Studd CR, Miczкова S, et al. (1)Fremantle Hospital,, (2)Royal Perth Hospital, Western Australia
MRI assessment of Crohn's activity (maca) study: a radiological pathological correlation.
Thin LW, Wellman C, et al.
(1)Centre for Inflammatory Bowel Diseases, Fremantle Hospital, WA., (2)Dept of Radiology, Fremantle Hospital, WA., (3)PathWest, Fremantle Hospital, WA., (4)School of Medicine and Pharmacology, UWA

Efficacy of adalimumab for the management of Inflammatory Bowel Disease in the Clinical Setting.[see comment].
Trinder MW, Lawrance IC.
Centre for inflammatory Bowel Diseases, University of Western Australia, Fremantle Hospital, Western Australia, Australia.
BACKGROUND: Anti-tumor necrosis factor (TNF)-alpha medications are effective in Crohn's Disease (CD) and efficacious in ulcerative colitis (UC). Adalimumab has been available through the Australian Pharmaceutical Benefits Scheme since August 2008, but clinical experience for inflammatory bowel disease (IBD) in Australia is limited. AIMS: To determine adalimumab efficacy for IBD in the Australian setting. METHODS: Crohn's disease or UC/IBD unclassified (UC/IBDU) patients received adalimumab after failure of disease control with conventional therapies or loss of control by infliximab. Response/remission at 8 and 12 weeks were determined by the Crohn's Disease Activity Index (CDAI) and Colitis Activity Index (CAI). All patients received 160 mg (week 0), 80 mg (week 2), followed by 40 mg every-other-week (eow). Patients with a limited response at 8 weeks were considered for weekly adalimumab. RESULTS: Of 38 CD patients 86.8% (33/38) had active luminal and 23.7% (9/38) fistulising disease at inclusion. Response occurred in 81.8% and 84.4% of luminal CD at 8 and 12 weeks, while 54.5% and 63.6% remitted respectively. 77.8% of fistulising CD responded and 55.6% remitted at 12 weeks. Fifteen CD patients had previously lost response to infliximab, and 86.7% of these responded and 53.3% remitted at 12 weeks. Of the seven UC/IBDU patients 43% and 14% responded, while 29% and 0% remitted at 8 and 12 weeks. CONCLUSION: In CD, adalimumab is as, if not more, effective in the clinical setting than in the trials, and is effective in patients with an attenuated response to infliximab. Its efficacy is not as good in UC, but this requires further clarification.
PMID:19220669

Resumption of oral intake following percutaneous endoscopic gastrostomy.
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R. W. L. Leong, Concord Hospital, Ambulatory Care Endoscopy Unit, Hospital Rd, Concord, NSW 2139, Australia. E-mail: rupertleong@hotmail.com
Background and Aims: Percutaneous endoscopic gastrostomy (PEG) provides enteral nutrition to patients who cannot swallow. Few studies have prospectively evaluated its long-term outcomes or eventual resumption of oral intake. Methods: Consecutive PEG patients were prospectively recruited from a tertiary hospital over 12 months and followed until all had met the primary endpoints of death or resumption of oral diet with PEG extubation. Data was collected by standardised periodic phone interview. Results: Forty patients (24 males, median age 74 years) were followed for up to 8.4 years (median 5.3 months, interquartile range [IQR] 13.6 months). The end-of-study mortality rate was 70% (median 6.8 months, IQR 19.9 months) and the only predictor of mortality was head injury as the indication for PEG (Cox regression HR 5.90, 95% CI: 1.2-28.4). At two years following PEG, 30% of
patients had resumed oral intake (median 2.9 months, IQR 7.2 months) and 19% remained on PEG-feeding. Predictors of resumption of oral intake were the ability to tolerate some oral intake at 3 months (HR: 248.5, 95% CI: 8.7-7065.3) and 6 months (HR: 6.3, 95% CI: 1.03-38.9) but not at 12 months. Cumulative survival was highest for ear nose and throat (ENT) tumour and worst for acute head injury (log rank P = 0.048). Conclusions: Half of all PEG patients remained alive at 2 years using PEG or have resumed full oral intake. A supervised trial of oral intake at 3 or 6 months may help predict eventual resumption of per oral diet. copyright 2009 Journal of Gastroenterology and Hepatology Foundation and Blackwell Publishing Asia Pty Ltd.


**Co-ordinated approach to healthcare worker influenza vaccination in an area health service.**
Ballestas T, McEvoy SP, et al.
South Metropolitan Public Health Unit, Fremantle, Western Australia.
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To increase local influenza vaccination uptake among healthcare workers (HCWs), a co-ordinated, area-wide influenza vaccination campaign was undertaken in 2008 for five hospitals in the South Metropolitan Area Health Service of Perth, Western Australia (WA). The programme included standardised marketing and data collection, with a consent form completed by each recipient. Denominator data were obtained from the WA Department of Health’s staff database. Vaccination coverage at each hospital was calculated and compared with that of 2007, with predictors for vaccination determined using a follow-up cross-sectional survey. A total of 6387 influenza vaccinations were administered. The coverage rate was above 55% in all but one hospital (range: 48.8-76.5%) whereas in 2007 no hospital achieved 55% (range: 29-51%). Allied health professionals attained the highest coverage (57.7%), followed by doctors (51.9%), nurses (49.6%) and patient support staff (48.6%). Of HCWs who worked half-time or more, 58.8% were vaccinated. The main reasons for vaccination were to prevent influenza, limit spread, and the programme’s availability. The survey revealed that HCWs who perceived that they were susceptible to influenza, that it was a serious disease and that immunisation was effective and important were significantly more likely to be vaccinated. An area-wide approach to HCW influenza vaccination can substantially improve uptake. Regular working party meetings, consistent marketing, standardised data collection and analysis, and senior management support were key elements and could be used by others to attain good vaccination coverage among HCWs.

PMID:19783073


**Reasons for therapeutic inertia when managing hypertension in clinical practice in non-Western countries.**
Ferrari P, National Coordinators for the Reasons for not Intensifying Antihypertensive Treatment t.
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Insufficient awareness of hypertension guidelines by physicians may be an impediment to achieving adequate blood pressure (BP) control rates in clinical practice. We therefore conducted an open intervention survey among primary care physicians in 1596 centres from 16 countries in four different continents to prospectively assess what is the BP goal defined by physicians for individual patients and what are the reasons for not intensifying antihypertensive treatment when BP goals are not achieved. Enrolled patients (N=35,302) were either not treated to goal (N=22,887) or previously untreated (N=12,250). Baseline systolic and diastolic BP averaged 159/95+//-15/12 mm Hg. BP goals defined by physicians averaged 136+//-6 mm Hg for systolic and 86+//-5 mm Hg for diastolic BP. Patients’ individual risk stratification determined BP goals. At last visit BP averaged 132/81+//-11/8 mm Hg and values of <or=140/90 were reached in 92% of untreated and 80% of previously uncontrolled
treated hypertensives. The main reasons for not intensifying antihypertensive treatment when BP remained above goal were the assumption that the time after starting the new drug was too short to attain its full effect, the satisfaction with a clear improvement of BP or with a BP nearing the goal, and the acceptance of good self-measurements. In this open intervention program in primary care, a large proportion of patients achieved recommended BP goals. The belief that a clear improvement in BP is acceptable and that the full drug effect may take up to several weeks to be reached are frequent reasons for treatment inertia when goals are not achieved.

Publication Types: Multicenter Study
Research Support, Non-U.S. Gov't
PMID:18784735

Computed tomography in blunt pancreatic trauma: P150 - Educational Exhibit.
Agarwal A, Tee K, et al.
(1)Fremantle Hospital, Fremantle, and (2)Royal Perth Hospital, Perth, Australia

Al Moudi M, Sun Z, et al.
(1)Curtin University of Technology, and (2)Fremantle Hospital, Perth, Australia

(1)University Notre Dame Australia, Fremantle, and (2)Royal Perth Hospital, Perth, Australia

Development and testing of an EORTC quality of life module to assess proctitis after pelvic radiotherapy: P51 - Scientific Exhibit/Poster.
Halkett G, Aoun S, et al.
(1)WA Centre for Cancer and Palliative Care, Curtin University of Technology, (2)Fremantle Hospital, and (8)Sir Charles Gairdner Hospital, Perth, Western Australia, Australia; and (3)St. Olav's University Hospital, Trondheim, Norway; (4)University of Schleswig-Holstein, Keil, Germany; (5)Saint-Louis Hospital, Paris, France; and (6)University of Florence, Florence, and (7)Regina Elena National Cancer Institute, Rome, Italy

Radiological Patterns in Nontuberculous Mycobacterial Pulmonary Infections: P81 - Educational Exhibit.
(1)Fremantle Hospital, and (2)Royal Perth Hospital, Perth, Australia

CT detected abdominal aortic calcification in an Australian population. How young is too young?: P157 - Scientific Exhibit/Poster.
Vander Wal R, Welman CJ.
Department of Diagnostic and Interventional Radiology, Royal Perth Hospital, Perth, and Department

**Investigation of acute lower gastrointestinal bleeding with 16- and 64-slice multidetector CT.**
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We evaluated the usefulness of 16- and 64-slice multidetector CT (MDCT) in the detection of a bleeding site in acute lower gastrointestinal tract (GIT) haemorrhage by conducting a retrospective study of cases of presumed acute lower GIT haemorrhage imaged with CT in two teaching hospitals in an 11-month period. The patients underwent contrast enhanced CT using either a 16 or 64 MDCT. No oral contrast was used. One hundred milliliters of non-ionic intravenous contrast agent was injected at 4.5 mL/s, followed by a 60 mL saline flush at 4 mL/s through a dual head injector. Images were acquired in arterial phase with or without non-contrast and portal phase imaging with 16 x 1.5 mm or 64 x 0.625 mm collimation. Active bleeding was diagnosed by the presence of iodinated contrast extravasation into the bowel lumen on arterial phase images with attenuation greater than and distinct from the normal mucosal enhancement or focal pooling of increased attenuation contrast material within a bowel segment on portal-venous images. Further management and final diagnosis was recorded. Fourteen patients and 15 studies were reviewed. CT detected and localized a presumed bleeding site or potential causative pathology in 12 (80%) of the patients. Seven of these were supported by other investigations or surgery, while five were not demonstrated by other modalities. Eight patients had mesenteric angiography, of which only four corroborated the site of bleeding. CT did not detect the bleeding site in three patients, of which two required further investigation and definitive treatment. We propose that MDCT serves a useful role as the initial rapid investigation to triage patients presenting with lower GIT bleeding for further investigation and management.
PMID:19453529


**Paired kidney donations to expand the living donor pool.**
Ferrari P, De Klerk M.
Department of Nephrology, Fremantle Hospital, Perth; and School of Medicine and Pharmacology, University of Western Australia, Perth - Australia.

Introduction: The shortage of available deceased donors and the longer kidney transplant waiting lists in many countries around the world have placed greater emphasis on living donation (LD) as a means of meeting demand for transplantation in patients with end-stage kidney disease (ESKD). Methods and results: Increased LD rates are also driven by less invasive approaches to donor nephrectomy and by the excellent long-term results. LD kidney transplant outcomes are equivalent, if not superior, to those from deceased donors, even when donor and recipient are not genetically related, as is the case with spousal donations, the most frequent cohort of LD. Approximately 30% of willing and otherwise appropriate kidney donor/recipient pairs are biologically incompatible and do not proceed to live donor transplantation. In recent years, a number of strategies have been introduced to expand living donation programs beyond the classical direct donation, to overcome immunological barriers of blood group or HLA sensitization of recipients. New strategies in LD include paired kidney exchange (PKE), altruistic donation, altruistic donor chains and list exchange programs. Other alternative programs are desensitization and transplantation across the blood-type barrier. Regular PKE programs operate nationally in The Netherlands and the United Kingdom, or regionally in South Korea, Romania, the United States and Australia. Conclusions: If PKE were performed routinely using 2-way or 3-way PKE and altruistic donor chains, the rate of kidney transplants could increase by between 7% and 10%.
PMID:19967648
Neuropsychiatric disorders in early untreated Parkinson's disease.
Starkstein SE.

Comments on an article by D. Aarsland and colleagues (see record 2009-11526-022). Psychiatric disorders and cognitive deficits are frequent comorbid conditions in Parkinson's disease (PD) and may become evident early in the illness. In their article, Aarsland and colleagues assessed the frequency of neuropsychiatric disorders in an incident cohort of 175 drug naive PD patients and 166 age and gender comparable healthy controls. The main finding was that depression, apathy, anxiety and sleep disturbances were significantly more frequent in the PD sample than in the healthy group. One limitation of this and other recent studies is that the psychiatric assessment was carried out with the Neuropsychiatric Inventory (NPI), an excellent tool for screening purposes but with unclear value in providing definite psychiatric diagnoses. In conclusion, the excellent study of Aarsland and colleagues stresses that neuropsychiatric disorders are highly prevalent in epidemiologically representative samples of patients with PD, that these disorders may be already found in the early stages of the illness and that antiparkinsonian medication may not play a prominent role in the mechanism of these conditions in early PD. (PsycINFO Database Record (c) 2009 APA, all rights reserved).

Publication Types: Comment/Reply
PMID:Peer Reviewed Journal: 2009-11526-002

Neuromaging correlates of apathy and depression in Alzheimer's disease.
Starkstein SE, Mizrahi R, et al.

A consecutive series of 79 patients with probable Alzheimer's disease were assessed with a structured psychiatric evaluation, and diagnoses of apathy and depression were made using standardized criteria. Three-dimensional MRI scans were obtained from all patients, and images were segmented into gray matter, white matter, and CSF. White matter hyperintensities were edited on segmented images, and lobar assignments (frontal, temporal, parietal, and occipital) were made based on Talairach coordinates. Patients with apathy showed a significantly larger volume of frontal white matter hyperintensities than patients without apathy. Patients with depression had a significantly larger volume of right parietal white matter hyperintensities than patients without depression. However, neither apathy nor depression was significantly associated with lobar gray or white matter atrophy. Frontal and right parietal white matter hyperintensities are the strongest brain structural correlates of apathy and depression in Alzheimer's disease.

PMID:19776304

High-frequency ultrasound measurement for assessing post-thrombotic syndrome and monitoring compression therapy in chronic venous disease.

Background: The purpose of this study was to validate high-frequency ultrasound (HFU) measurement of dermal thickness for quantification of edema in patients with different severities of chronic venous
disease. Methods: HFU measurements of dermal thickness were made with a 17-MHz probe (Philips iU22 Ultrasound scanner, Bothell, Wash) or a 20-MHz medium-focus probe (DermaScan-C, Cortex Technology, Denmark), 7.5 cm above the medial malleolus. For validation, 20 patients with venous leg ulcers who were not receiving compression therapy, 20 patients with previous deep vein thrombosis (DVT) and symptoms of post-thrombotic syndrome (PTS) without ulceration, and 31 age-matched healthy controls were measured on a single occasion. To investigate the effect of compression on dermal thickness, the leg ulcer patients from the validation study were treated with compression therapy for 7 weeks and measured after 1, 3, 5, and 7 weeks. The association between dermal thickness and the clinical (C) component of the CEAP classification was examined in a cross-sectional analysis of 157 patients with a confirmed history of DVT [greater-than or equal to]3 years ago. Results: Dermal thickness in patients with venous leg ulcers before compression therapy (median, 2.56 mm; interquartile range [IQR], 2.31-2.82 mm) was significantly greater (P = .002) than that in patients with symptoms of PTS without ulceration (median, 2.16 mm; IQR, 1.90-2.36 mm). Dermal thickness in both groups was significantly greater (P < .0001) than the control group (median, 1.34 mm; IQR, 1.29-1.44 mm). Compression therapy caused a steady and significant decrease in dermal thickness during the first 5 weeks until normal control levels were achieved. Dermal thickness increased with increasing CEAP category. In 121 patients with a positive diagnosis of DVT [greater-than or equal to]3 years ago from Radiology Department records, a hypothetical test cutoff of 1.985 mm for the prediction of severe PTS noted as C4b, C5, and C6 (lipodermatosclerosis or leg ulceration) had a positive predictive value of 46.9% and a negative predictive value of 90.3%. Conclusion: HFU measurement of dermal thickness enables the monitoring of edema reduction by compression therapy. A prospective study is required to determine the temporal dynamics of dermal thickness changes after DVT and the relationship to the development of PTS. This test has the potential to be beneficial in the follow-up of patients after a DVT and provide clinical evidence for using graduated elastic compression stockings to control edema and prevent the development of more advanced skin changes. copyright 2009 Society for Vascular Surgery.

PMID:2009508399


Licorice: a sweet alternative to prevent hyperkalemia in dialysis patients? [comment].

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In patients on hemodialysis, Farese et al. report that inhibition of the enzyme 11beta-hydroxysteroid dehydrogenase type 2 by glycyrrhetinic acid, the active compound of licorice, reduces serum potassium concentration and the frequency of hyperkalemia, possibly by enhancing intestinal potassium loss. This finding could be an important tool to maintain predialysis [K(+)]) within safe limits in some dialysis patients at risk of hyperkalemic arrhythmias.

PMID:19789539


Assessment of isometricity before and after total knee arthroplasty: a cadaver study.

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Total knee arthroplasty (TKA) relies on soft tissue to regulate joint stability after surgery. In practice, the exact balance of the gaps can be difficult to measure, and various methods including intraoperative spreaders or distraction devices have been proposed. While individual ligament strain patterns have been measured, no data exist on the isometricity of the soft tissue envelope as a whole. In this study, a novel device was developed and validated to compare isometricity in the entire soft tissue envelope for both the intact and TKA knee. A spring-loaded rod was inserted in six cadaver knee joints between the tibial shaft and the tibial plateau or tibial tray after removing a 7 mm slice of
bone. The displacement of the rod during passive flexion represented variation in tissue tension around the joint. The rod position in the intact knee remained within 1 mm of its initial position between 15 degrees and 135 degrees of flexion, and within 2 mm (+/-1.2 mm) throughout the entire range of motion (0-150 degrees). After insertion of a mobile-bearing TKA, the rod was displaced a mean of 6 mm at 150 degrees (p<0.001). The results were validated using a force transducer implanted in the tibial baseplate of the TKA, which showed increased tibiofemoral force in the parts of the flexion range where the rod was most displaced. The force measurements were highly correlated with the displacement pattern of the spring-loaded rod (r=-0.338; p=0.006). A simple device has been validated to measure isometricity in the soft tissue envelope around the knee joint. Isometricity measurements may be used in the future to improve implantation techniques during TKA surgery.

PMID:19211251

A comparison of the sensitivities of detection of Plasmodium falciparum gametocytes by magnetic fractionation, thick blood film microscopy, and RT-PCR.
Karl S, Davis TM, et al.
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Background. The magnetic properties of Plasmodium-infected erythrocytes have been exploited for different clinical and research purposes. A recent study in a rural clinical setting in Papua New Guinea has demonstrated that Plasmodium falciparum gametocyte detection is facilitated by magnetic deposition microscopy but no study has yet determined the relative sensitivity and limit of detection of a magnetic fractionation technique. The present study compares the detection limit and sensitivity of a technique based on the use of commercially available magnetic fractionation columns with those for thick blood film microscopy and reverse transcriptase polymerase chain reaction (RT-PCR) methods.
Methods. Gametocyte detection in six series of dilutions of cultured P. falciparum parasites with known gametocytaemia was conducted using magnetic fractionation, thick blood film, and RT-PCR techniques. Results. The preparations obtained by the magnetic fractionation method were of thin film quality allowing easy gametocyte identification by light microscopy. Magnetic fractionation had a higher sensitivity and approximately two orders of magnitude better limit of detection than thick blood film microscopy. Gametocytes were also more readily detectable on the magnetically fractionated preparations. Magnetic fractionation had a similar limit of detection to that of RT-PCR. Conclusion. Magnetic fractionation is a highly sensitive and convenient method for gametocyte detection in comparison with the standard thick blood film and RT-PCR methods, and could readily be adapted to field application. copyright 2009 Karl et al; licensee BioMed Central Ltd.
PMID:2009379998

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Background. Recently developed Sybr Green-based in vitro Plasmodium falciparum drug sensitivity assays provide an attractive alternative to current manual and automated methods. The present study
evaluated flow cytometry measurement of DNA staining with Sybr Green in comparison with the P. falciparum lactate dehydrogenase assay, the tritiated hypoxanthine incorporation assay, a previously described Sybr Green based plate reader assay and light microscopy. Methods. All assays were set up in standardized format in 96-well plates. The 50% inhibitory concentrations (IC50) of chloroquine, mefloquine and dihydroartemisinin against the laboratory adapted P. falciparum strains 3D7, E8B, W2mef and Dd2 were determined using each method. Results. The resolution achieved by flow cytometry allowed quantification of the increase in individual cell DNA content after an incubation period of only 24 h. Regression, and Bland and Altman analyses showed that the IC50 values determined using the flow cytometry assay after 24 h agreed well with those obtained using the hypoxanthine incorporation assay, the P. falciparum lactate dehydrogenase assay, the Sybr Green plate reader assay and light microscopy. However the values obtained with the flow cytometry assay after 48 h of incubation differed significantly from those obtained with the hypoxanthine incorporation assay, and the P. falciparum lactate dehydrogenase assay at low IC50 values, but agreed well with the Sybr Green plate reader assay and light microscopy. Conclusions. Although flow cytometric equipment is expensive, the necessary reagents are inexpensive, the procedure is simple and rapid, and the cell volume required is minimal. This should allow field studies using fingerprick sample volumes. copyright 2009 Karl et al; licensee BioMed Central Ltd.

PMID:2010050103


Should aspirin be used for the primary prevention of cardiovascular disease in people with diabetes?
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Publication Types: Letter
PMID:2010277340


In reply.
Davis WA, Colagiuri S, et al.
(Davis, Davis) School of Medicine and Pharmacology, University of Western Australia, Fremantle Hospital, Fremantle, WA, Australia. (Colagiuri) Department of Metabolic Health, Boden Institute of Obesity, Nutrition and Exercise, University of Sydney, Sydney, NSW, Australia.
W. A. Davis, School of Medicine and Pharmacology, University of Western Australia, Fremantle Hospital, Fremantle, WA, Australia.
Publication Types: Letter
PMID:2010277478


A prescription for a smile.
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Patients often have difficulty remembering drug names accurately. Two instances, from my time as a
junior doctor in the United Kingdom in the 1990s, have stayed in my memory. The first occurred during a long and busy night on call. I was admitting an elderly woman and I was tired and fed up. I asked her about her medication and she gave me a handwritten list. Halfway down, in quavery capitals, was FROLIC ACID. It made my night. It also triggered a memory, from several years earlier, of another patient, encountered on a consultant’s ward round. She had been prescribed omeprazole, which was still under patent at the time and marketed under the trade name “Losec”. The consultant asked her if her indigestion had improved. “Oh yes, doctor”, she replied, “it’s been ever so much better since you gave me that Slosex tablet”. We had to stop the ward round for several minutes to compose ourselves. Even though more than 10 years have elapsed, the memory still makes me smile.

Comparison of the Framingham and United Kingdom Prospective Diabetes Study cardiovascular risk equations in Australian patients with type 2 diabetes from the Fremantle Diabetes Study.[comment].
McCallum RW, Burgess JR, et al.
PMID:19580543

Glycaemic control in patients with type 1 diabetes after provision of public hospital-funded insulin pumps.
Thong KY, Fegan PG, et al.
Publication Types: Letter
PMID:19740060

Varenicline and proximal myopathy.
Wood SE, Fegan PG.
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Publication Types: Letter
PMID:2010279360

Comparison of the Framingham and United Kingdom Prospective Diabetes Study cardiovascular risk equations in Australian patients with type 2 diabetes from the Fremantle Diabetes Study.
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OBJECTIVE: To assess the performance of the Framingham and United Kingdom Prospective Diabetes Study (UKPDS) cardiovascular risk equations in Australian patients with type 2 diabetes who were initially free of cardiovascular disease (CVD). DESIGN AND SETTING: The Fremantle Diabetes Study (FDS), a community-based longitudinal observational study; data for the period 1993-2006 were used. PATIENTS: Of the 815 FDS participants with type 2 diabetes who were initially CVD-free, 791 (97%) were eligible for assessment using the UKPDS equations, and 697 (86%) using the Framingham equation. MAIN OUTCOME MEASURES: CVD endpoints during 5 years of follow-up. For the UKPDS equations, these were fatal myocardial infarction (MI) or sudden death (fatal coronary heart disease [CHD]); hospitalisation for/with or death from MI or sudden death (all CHD); fatal stroke;
and all stroke. For the Framingham equation, they were all MI, sudden death or angina pectoris (CHD).

RESULTS: During follow-up to first CVD event, death or 5 years, there were 38 MIs (11 fatal) and 23 strokes (13 fatal) in the UKPDS-assessable cohort of FDS participants. The UKPDS risk equations for all CHD, fatal CHD, and all stroke overestimated the number of events by 6.5, 2.8 and 1.8 times, respectively. The risk equation for fatal stroke underestimated the number of events by 38%. The UKPDS CHD risk equations showed modest discrimination and poor calibration, while the stroke risk equations showed good discrimination and calibration. The Framingham equation predicted 28% fewer CHD events than occurred (93 v 130), and discrimination and calibration were poor.

CONCLUSIONS: While the UKPDS stroke risk equations performed relatively well, the UKPDS and Framingham CHD risk equations are not suitable for predicting risk in Australians with type 2 diabetes.

Publication Types: Research Support, Non-U.S. Gov't
PMID:19220181

Paired kidney donations to expand the living donor pool: the Western Australian experience.
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Falling numbers of deceased organ donors and longer kidney transplant waiting lists have increased the emphasis on live kidney donation to meet demand for kidney transplantation. Several new strategies have been introduced to expand live donation beyond the classic direct donation. These include: altruistic donation; paired kidney exchange (PKE); and altruistic donor chains programs. Using incompatible donor-recipient pairs and altruistic donors, the Western Australian PKE program achieved nine successful kidney transplantations between October 2007 and November 2008. If PKE were performed routinely in Australia, the rate of kidney transplants could increase by 7%-10%.

PMID:19527208

Training Surface and Intensity: Inflammation, Hemolysis, and Hepcidin Expression.
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Purpose: This investigation assessed the effects of training intensity and ground surface type on hemolysis, inflammation, and hepcidin activity during running., Methods: Ten highly trained male endurance athletes completed a graded exercise test, two continuous 10-km runs on a grass (GRASS) and a bitumen road surface (ROAD) at 75%-80% peak V\(\text{O}_2\) running velocity, and a 10 x 1-km interval running session (INT) at 90%-95% of the peak V\(\text{O}_2\) velocity. Venous blood and urine samples were collected before, immediately after, and at 3 and 24 h after exercise. Serum samples were analyzed for circulating levels of IL-6, free hemoglobin (Hb), haptoglobin (Hp), iron, and ferritin. Urine samples were analyzed for changes in hepcidin expression., Results: After running, the IL-6 and free Hb were significantly greater, and serum Hp was significantly lower than preexercise values in all three conditions (\(P < 0.05\)). Furthermore, IL-6 levels and the change in free Hb from baseline were significantly greater in the INT compared with those in the GRASS (\(P < 0.05\)). There were no differences between the GRASS and ROAD training surfaces (\(P > 0.05\)). Serum iron and ferritin were significantly increased after exercise in all three conditions (\(P < 0.05\)) but were not different between trials., Conclusion: Greater running intensities incur more inflammation and hemolysis, but these variables were not affected by the surface type trained upon., (C)2009The American College of Sports Medicine
Sitagliptin and metformin combination therapy for type 2 diabetes.

Davis TME.
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Publication Types: Short Survey
PMID:2009595237

The syndromal validity and nosological position of apathy in Parkinson's disease.

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Although apathy is among the most frequent behavioral changes in Parkinson's disease (PD), its diagnosis is still problematic, and the overlap with depression and dementia poorly studied. Aim of the study was validate speci.c criteria to diagnose apathy in PD, and to examine its association with subsyndromes of depression and dementia. A series of 164 patients with PD, 44 patients with "primary" depression and no PD, 23 patients with Alzheimer's disease, and 26 age-comparable healthy controls underwent a comprehensive psychiatric assessment that included a structured psychiatric interview and the Apathy Scale. A set of seven diagnostic criteria showed high sensitivity and specificity for clinically diagnosed apathy. Fifty-two of the 164 patients with PD (32%) met diagnostic criteria for apathy. Eighty-three percent of patients with apathy had comorbid depression and 56% had dementia. Only 5 of the 40 PD patients (13%) with neither depression nor dementia had apathy. We validated a set of standardized criteria for the diagnosis of apathy in PD. About one third of a series of patients attending a Movement Disorders Clinic showed apathy. Both depression and dementia were the most frequent comorbid conditions of apathy in PD.
PMID:2009378097

Testosterone and ill-health in aging men.

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As men age, testosterone levels decline, and decreased testosterone levels are associated with increased risks of osteoporosis, metabolic syndrome, type 2 diabetes mellitus and mortality. Nevertheless, it is still uncertain whether reduced testosterone level is a cause of ill-health or a marker of pre-existing disease, as systemic illness lowers testosterone levels. Most circulating testosterone is bound to sex-hormone-binding globulin (SHBG) and albumin, whereas a small proportion circulates as free testosterone. Decreased SHBG level is associated with increased risks for insulin resistance and metabolic syndrome, although it would also be expected to be associated with increased free testosterone level. During male aging, total and free testosterone levels fall while SHBG level rises. Thus, associations between decreasing androgens and negative health outcomes might differ across
men of various ages. Trials of testosterone therapy report benefits for body composition and BMD, but there are limited data on the effect of testosterone supplementation on cardiovascular risk. Whereas men who have androgen deficiency should be considered for testosterone therapy, the role of testosterone supplementation in older men who are not clearly hypogonadal requires further clarification. Further studies are also needed to establish whether the age-related decline in circulating testosterone level in men can be modified or prevented.

PMID:19165223

**WA Home Dialysis Program (WAHDIP): a corporatised model for home dialysis - 2 year review:** 009.
Boudville NC, Bennett T, et al.
(1)Sir Charles Gairdner Hospital, Perth, WA, Australia; (2)University of Western Australia, WA, Australia; (3)Fremantle Hospital, Fremantle, WA, Australia; (4)Royal Perth Hospital, Perth, WA, Australia

Nephrology. 2009; 14(1 Suppl): A50.
**Pentoxifylline improves haemoglobin levels in chronic kidney disease by an IL-6 dependent mechanism:** 187.
(1)Department of Nephrology, Fremantle Hospital; (2)Department of Immunology, Fremantle Hospital; (3)Department of Gastroenterology, Fremantle Hospital; (4)School of Medicine and Pharmacology, University of Western Australia

Nephrology. 2009; 14(1 Suppl): A51.
**The Western Australian experience with paired kidney donations:** 191.
(1)Department of Nephrology, Fremantle Hospital; (2)School of Medicine and Pharmacology; (3)School of Pathology and Laboratory Medicine, University of Western Australia; (4)Department of Immunology and Immunogenetics, PathWest, Royal Perth Hospital, Perth, Western Australia, Australia

**Outcome of a community screening campaign to detect chronic kidney disease in subjects at risk:** 033.
(1)Department of Nephrology, Fremantle Hospital; (2)School of Medicine and Pharmacology, University of Western Australia, Perth, Western Australia, Australia

**Citrate anticoagulation during long-term haemodialysis:** 025.
Wright S, Young J, et al.
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**Serum phosphate is an important determinant of corrected serum calcium in end-stage kidney**
Background: Approximately 12% of bound blood calcium is linked to various anions including phosphate. In patients with end-stage kidney disease (ESKD), serum phosphate is highly variable. We propose that establishing a formula to calculate albumin- and phosphate-corrected total calcium would be more appropriate to estimate free calcium in ESKD patients.

Methods: In 82 haemodialysis patients, serum ionized calcium (Caion) and pH were measured by blood gas analyser with ion-selective electrodes at the point-of-care, while bicarbonate, phosphate, albumin, magnesium and total calcium (Catot) were measured at the central laboratory. Linear regression analysis of measured variables was used to best fit adjusted calcium versus Caion.

Results: The most parsimonious multiple linear regression model (r² = 0.81) of variables associated with Caion included Catot (coeff 0.820, P < 0.0001), albumin (coeff -0.016, P < 0.0001) and phosphate (coeff -0.063, P < 0.002).

Modelling of available variables yielded the following equation to adjust calcium for albumin and phosphate: CaalbPh = Catot + (0.015 x (40 - [albumin]) + 0.07 x (1.5 - [phosphate])). At an ambient albumin of 40 g/L, CaalbPh would be 0.07 mmol/L lower than Catot for every mmol/L of phosphate. In vitro data using three different albumin levels and increasing phosphate concentrations demonstrated this relationship, with the slope of the phosphate effect being stronger at lower albumin concentrations.

Conclusion: Because guidelines recommendations indicate that corrected serum calcium should be maintained within the normal range in ESKD patients, inclusion of phosphate to correct Catot in these patients may have clinical implications on the choice of phosphate binders and the prescription of vitamin D or calcimimetic agents.

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the degree of inaccuracy in cystatin C- and creatinine-based predictive equations brings into question their clinical utility in OLT recipients. We have no evidence that cystatin C is superior to creatinine in this population.

PMID:2009453053


Estimation of glomerular filtration rate: does haemoglobin discriminate between ageing and true CKD?
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Aim: The aim of this study was to analyse the association between chronic kidney disease (CKD) defined by an estimated glomerular filtration rate (eGFR) <60 ml/min/1.73 m2 and anaemia in older people., Background: Guidelines focus on early identification and management of CKD to prevent CKD progression and cardiovascular disease. However, the significance of CKD classification using eGFR in older people is unclear., Methods: Serum creatinine and haemoglobin from individuals attending non-nephrology outpatient clinics were extracted from the state pathology provider over a 4-month period. The associations between eGFR, gender, age and haemoglobin were explored., Results: Serum creatinine in 9853 individual patients aged >=15 years was available for analysis. Haemoglobin was simultaneously available in 8752 (88.8%) subjects. There was a negative relationship between age and median eGFR, and the slope of the regression line was -0.68 ml/min/year for males and -0.74 ml/min/year for females. Over 35% of individuals >=65 years were classified as having CKD stage >=3. Odds ratios for haemoglobin <100 g/l for an eGFR <15, 15-29 and 30-59 versus reference GFR >=60 ml/min/1.73 m2 in subjects 25-44 years were 34.2 (30.7-37.7), 23.4 (20.2-26.6) and 7.2 (5.3-9.1), respectively. In comparison, these were 8.9 (6.7-11.1), 5.6 (4.9-7.3) and 1.6 (1.1-2.1), respectively, in subjects >=65 years. In subjects >=65 years, odds ratios for haemoglobin <100 g/l for an eGFR 30-44 and 45-59 ml/min/1.73 m2 versus reference GFR >=60 ml/min/1.73 m2 were 1.9 (1.3-2.5) and 1.2 (0.7-1.7), respectively., Conclusions: An eGFR <60 ml/min/1.73 m2 is very common in older people. Only an eGFR <45 ml/min/1.73 m2 identified a smaller sub-group of older people with an increased prevalence of significant anaemia suggesting a clinically relevant disease. The benefits of identifying older people with an eGFR >=45 ml/min/1.73 m2 need to be determined., (C) European Renal Association - European Dialysis and Transplant Association 2009. Published by Oxford University Press. All rights reserved.


Medical image. A twist in the tale. Omental torsion.
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PMID:19465954


Confirmation of two major polyarticular osteoarthritis (POA) phenotypes - differentiation on the basis of joint topography.
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G.J. Carroll, ArthroCare Pty Ltd, Australia. E-mail: md@arthrocare.com.au

Objectives: Previous studies of patients with primary hand and ankle osteoarthritis (OA) have suggested the presence of two major polyarticular OA (POA) phenotypes, designated Type 1 and Type 2. The former, characterised by sentinel distal interphalangeal (IP) (DIP) or proximal IP (PIP) joint OA resembles generalised OA (GOA), whereas the latter characterised by sentinel metacarpophalangeal (MCP)2,3 OA, resembles the arthropathy associated with hereditary haemochromatosis (HH). The aim of this study was to validate these putative phenotypes and to further investigate their clinical and genetic characteristics. Methods: Newly referred patients had X-rays if pre-determined clinical criteria for OA in hand and other joints were met. Subjects were assigned to the putative Type 1 POA (T1POA) or Type 2 POA (T2POA) phenotypes if radiological criteria were satisfied. Human haemochromatosis (HFE) gene mutations were determined in buffy-coat DNA by polymerase chain reaction amplification, followed by restriction enzyme cleavage and analysis on a 3% agarose gel. The significance of differences was determined by Chi-square test or by Fisher's exact test. Results: Sixty-seven patients fulfilled criteria for inclusion in this study; 39 (6M, 33F) for T1POA and 28 (18M, 10F) for T2POA. A statistically significant difference in gender was observed (64% male in the T2POA subset, P < 0.0001). Heberden's nodes (HNs) were found in 34 of the 39 Type 1 subjects, but in only nine of the 28 Type 2 subjects (P < 0.0001). HFE gene mutations were found in nine of the 39 Type 1 subjects (23%), whereas 21 of the 28 Type 2 subjects had a single HFE gene mutation (75%, P < 0.0001). Conclusions: These findings confirm the hitherto hypothetical proposition of a T1POA phenotype conforming to nodal GOA (NGOA) and a T2POA phenotype closely resembling the arthropathy described in haemochromatosis (HH).

PMID:2009251777


Postoperative non-echo-planar diffusion-weighted magnetic resonance imaging changes after cholesteatoma surgery: implications for cholesteatoma screening.

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OBJECTIVES: Diffusion-weighted (DW) magnetic resonance imaging (MRI) is emerging as an alternative to second-look surgery in ruling out residual or recurrent disease after cholesteatoma eradication. However, the DW MRI appearances of postoperative or inflammatory mucosal changes have not been well investigated, thus rendering the interpretation of postoperative DW MRI difficult in the presence of mucosal reactions. We investigated the turbo-spin echo (TSE) DW MRI changes of the middle ear and mastoid mucosa after cholesteatoma surgery and compared these with the TSE DW MRI features of cholesteatoma with an aim to identify a rapid and cost-effective purely DW MRI sequence that can be used to screen for cholesteatoma. STUDY DESIGN: A prospective comparative study. SETTING: A tertiary referral center in Western Australia. PATIENTS: Patients undergoing revision or second-look cholesteatoma surgery. INTERVENTION: Patients underwent 3 to 6 monthly half-Fourier-acquisition single-shot turbo-spin-echo TSE DW MRI before their second surgery. The MRI findings were then correlated with the intraoperative findings at second-look surgery 6 to 17 months after primary surgery or of revision surgery in the cases that were referred from other centers. MAIN OUTCOME MEASURE: Detection of cholesteatoma and noncholesteatoma mucosal changes on TSE DW MRI, compared with the gold standard of findings at second surgery. RESULTS: Twenty-two patients underwent 23 second-look or revision procedures. All patients had DW MRI before their "second-look" or revision surgery. TSE DW MRI detected cholesteatomas in 7 patients whom all had disease confirmed at second-look or revision surgery. In 16 cases shown to be negative on DW MRI for cholesteatoma, all were confirmed to be disease-free on second-look surgery. Cholesteatomas were shown to produce a TSE DW MRI signal clearly distinct from the spectrum of imaging findings encountered in postoperative mucosal changes. CONCLUSION: TSE DW MRI holds great promise in screening for cholesteatoma as an alternative to exploratory second-look surgery.

PMID:19092558
An Evolutionary Biology Approach to Chronic Widespread Pain (Fibromyalgia).
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Endoscopic total retroperitoneal distal pancreatectomy in a large animal model.
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Traditionally, distal pancreatic lesions are resected by the open technique. An ever-increasing number of laparoscopic transperitoneal distal pancreatectomy cases are being reported. This study explores the possibility of performing distal pancreatectomy via an endoscopic retroperitoneal approach. This study was done in two stages using a total of 15 pigs: the first stage involved dissection in euthanized pigs, and the second stage involved anesthetized pigs. In both stages of the study, distal pancreatectomy could be performed within an acceptable time frame and with acceptable resection margins and morbidity rate. We introduce the concept of endoscopic total retroperitoneal distal pancreatectomy as an approach for distal pancreatectomy. Copyright 2008 S. Karger AG, Basel and IAP.

And tell yourself, "This is not me, it's the drug": Coping with the psychological impact of corticosteroid treatments in hematology--Further results from a pilot study.
McGrath P, Patton MA, et al.

Background: Corticosteroids are documented as associated with psychological adverse effects, including insomnia, irritability, aggression, neuropsychological deficits, mood disorders (including severe depression), delirium, and psychosis. Given the severity of these potential adverse effects and that corticosteroid use is central to the treatment of most hematological malignancies, it would be expected that a thorough research literature would exist on the effects of corticosteroid use in hematology. However, scant research is available. This leaves many questions unanswered and a vacuum for clinical practice. Thus, there is a strong need for empirical data, not only on the psychological adverse effects experienced by patients, but also on the coping strategies patients use to manage them. Objective: To present findings on the coping strategies used by ten hematology patients in Australia undergoing treatment involving corticosteroids as a first step in understanding the emotional and psychological effects experienced by this group of patients. Methods: The pilot study was conducted from January 2007 until March 2008. The study participants were ten hematology outpatients (eight with multiple myeloma, two with acute immune thrombocytopenia purpura) from two major Australian public hospitals (Princess Alexandra Hospital, Brisbane, Queensland, and Fremantle Hospital, Fremantle, Western Australia) who were taking dexamethasone and/or prednisolone and
referred to the study by their treating hematologists on the basis that they were experiencing difficulties with their corticosteroid therapy. Data were collected through an iterative, phenomenological, qualitative research methodology using open-ended interviews. Interview transcriptions were entered into the QSR NUD*IST (Non-numeric, Unstructured Data * Index and Searching Technology) computer program and analyzed thematically. Results: Coping strategies found to be helpful by patients included believing that corticosteroids are necessary for disease control, knowing that the negative emotional states being experienced are due to the corticosteroids, stoicism and self-reliance based on a cognitive-rational approach, keeping busy, remaining fit and active, and, for some, using antidepressants to help with mood swings. For sleep disturbances, patients found it helpful to try to accept the sleeplessness, engage in distraction, and have light sleeps. Support from family and friends who understand the range of corticosteroid adverse effects, including patients’ need to withdraw during treatment, was seen as important. Counseling was not considered helpful. Tapering corticosteroid doses and cessation of corticosteroids were also discussed as aids to coping. Conclusion: These findings provide a start to understanding how individuals cope with corticosteroid therapy for hematological conditions. There is a need for further extensive research in this area. (PsycINFO Database Record (c) 2009 APA, all rights reserved) (journal abstract).

PMID: Peer Reviewed Journal: 2009-17273-003


And Tell Yourself, "This is not Me, it’s the Drug": Coping with the Psychological Impact of Corticosteroid Treatments in Hematology - Further Results from a Pilot Study.

McGrath P, Patton MA, et al.

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Background: Corticosteroids are documented as associated with psychological adverse effects, including insomnia, irritability, aggression, neuropsychological deficits, mood disorders (including severe depression), delirium, and psychosis. Given the severity of these potential adverse effects and that corticosteroid use is central to the treatment of most hematological malignancies, it would be expected that a thorough research literature would exist on the effects of corticosteroid use in hematology. However, scant research is available. This leaves many questions unanswered and a vacuum for clinical practice. Thus, there is a strong need for empirical data, not only on the psychological adverse effects experienced by patients, but also on the coping strategies patients use to manage them. Objective: To present findings on the coping strategies used by ten hematology patients in Australia undergoing treatment involving corticosteroids as a first step in understanding the emotional and psychological effects experienced by this group of patients. Methods: The pilot study was conducted from January 2007 until March 2008. The study participants were ten hematology outpatients (eight with multiple myeloma, two with acute immune thrombocytopenia purpura) from two major Australian public hospitals (Princess Alexandra Hospital, Brisbane, Queensland, and Fremantle Hospital, Fremantle, Western Australia) who were taking dexamethasone and/or prednisolone and referred to the study by their treating hematologists on the basis that they were experiencing difficulties with their corticosteroid therapy. Data were collected through an iterative, phenomenological, qualitative research methodology using open-ended interviews. Interview transcriptions were entered into the QSR NUD*IST (Non-numeric, Unstructured Data * Index and Searching Technology) computer program and analyzed thematically. Results: Coping strategies found to be helpful by patients included believing that corticosteroids are necessary for disease control, knowing that the negative emotional states being experienced are due to the corticosteroids, stoicism and self-reliance based on a cognitive-rational approach, keeping busy, remaining fit and active, and, for some, using antidepressants to help with mood swings. For sleep disturbances, patients found it helpful to try to accept the sleeplessness, engage in distraction, and have light
sleeps. Support from family and friends who understand the range of corticosteroid adverse effects, including patients’ need to withdraw during treatment, was seen as important. Counseling was not considered helpful. Tapering corticosteroid doses and cessation of corticosteroids were also discussed as aids to coping.

Conclusion: These findings provide a start to understanding how individuals cope with corticosteroid therapy for hematological conditions. There is a need for further extensive research in this area.

Gross placental structure in a low-risk population of singleton, term, first-born infants.

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Suboptimal fetal growth has been associated with an increased risk of adult disease, which may be exacerbated by an increased placental weight-to-fetal weight ratio. Placental weight is a summary measure of placental growth and development throughout pregnancy. However, measures of placental structure, including the chorionic disk surface area and thickness and eccentricity of the umbilical cord insertion, have been shown to account for additional variance in birth weight beyond that explained by placental weight. Little is known of the variability of these placental parameters in low-risk populations; their association with maternal, pregnancy, and neonatal characteristics; and the agreement between manual and digital measures. This study used manual and digital image analysis techniques to examine gross placental anatomy in 513 low-risk, singleton, term, first-born infants. Parametric methods compared groups and examined relationships among variables. Maternal birth weight, prepregnancy weight, and body mass index were associated with increased placental and birth weight (all \( P < 0.005 \)), but only maternal birth weight was associated with increased placental surface area (\( P < 0.0005 \)) and thickness (\( P = 0.005 \)). Smoking during pregnancy reduced birth weight and increased the eccentricity of umbilical cord insertion (\( P = 0.012 \) and 0.034, respectively). The variability in these placental parameters was consistently lower than that reported in the literature, and correlations between digital and manual measurements were reasonable (\( r = .87 - .71 \)). Detailed analyses of gross placental structure can provide biologically relevant information regarding placental growth and development and, potentially, their consequences.


Laparoscopic resection for a gastric pheochromocytoma: a rare presentation of an uncommon tumor.

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Pheochromocytoma is a rare tumor of the stomach, having only been reported 6 times in the published literature. We report the first case of gastric pheochromocytoma treated by laparoscopic partial gastrectomy.

Publication Types: Case Reports

PMID:19542838
Correlation of MRI-determined small bowel Crohn's disease categories with medical response and surgical pathology.

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AIM: To determine whether magnetic resonance imaging (MRI) can be used to categorize small bowel Crohn's disease (SB CD) into groups that correlate with response to medical therapy and surgical pathology. METHODS: Data was collected from all patients with MRI evidence of SB CD without significant colonic disease over a 32-mo period. Two radiologists, blinded to clinical findings, evaluated each MRI and grouped them based on bowel wall thickness and wall enhancement. These categories were: (1) "fibrosis", (2) "mild segmental hyper-enhancement and mild wall thickening", (3) "mild segmental hyper-enhancement and marked wall thickening", (4) "marked segmental transmural hyper-enhancement". Patient response to additional medical therapy post-MRI was prospectively determined at 8-wk. Non-responders underwent endoscopy and were offered therapeutic endoscopy or surgery. Surgical pathology was assessed against the MRI category. RESULTS: Fifty-five patients were included. Females and category "2" patients were more likely, and patients with luminal narrowing and hold-up less likely, to respond to medical therapy (P < 0.05). Seventeen patients underwent surgery. The surgical pathological findings of fibrosis and the severity of inflammation correlated with the MRI category in all cases. CONCLUSION: Our findings suggest that SB CD can be grouped by the MRI findings and that these groups are associated with patients more likely to respond to continued medical therapy. The MRI categories also correlated with the presence and level of intestinal inflammation and fibrosis on surgical pathology, and may be of prognostic use in the management of CD patients.

PMID:19610137

Small bowel MRI enteroclysis or follow through: which is optimal?

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AIM: To determine if a nasojejunal tube (NJT) is required for optimal examination of enteroclysis and if patients can be examined only in the supine position. METHODS: Data were collected from all patients undergoing small bowel (SB) magnetic resonance imaging (MRI) examination over a 32-mo period. Patients either underwent a magnetic resonance (MR) follow-through (MRFT) or a MR enteroclysis (MRE) in the supine position. The quality of proximal and distal SB distension as well as the presence of motion artefact and image quality were assessed by 2 radiologists. RESULTS: One hundred and fourteen MR studies were undertaken (MRFT-49, MRE-65) in 108 patients in the supine position only. Image artefact was more frequent in MRE than in MRFT (29.2% vs 18.4%), but was not statistically significant (P=0.30). Adequate distension of the distal SB was obtained in 97.8% of MRFT examinations and in 95.4% of MRE examinations, respectively. Proximal SB distension was, however, less frequently optimal in MRFT than in MRE (P=0.0036), particularly in patients over the age of 50 years (P=0.0099). Image quality was good in all examinations. CONCLUSION: All patients could be successfully imaged in the supine position. MRE and MRFT are equivalent for distal SB distension and artefact effects. Proximal SB distension is frequently less optimal in MRFT than in MRE. MRE is, therefore, the preferred MR examination method of the SB.

PMID:19908338

Stevens-Johnson syndrome complicating adalimumab therapy in Crohn's disease.

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The anti-tumor necrosis factor (TNF)alpha medications demonstrate efficacy in the induction of remission and its maintenance in numerous chronic inflammatory conditions. With the increasing number of patients receiving anti-TNFalpha agents, however, less common adverse reactions will occur. Cutaneous eruptions complicating treatment with an anti-TNFalpha agent are not uncommon, occurring in around 20% of patients. Adalimumab, a fully humanized antibody against TNFalpha, may be expected to cause minimal immune-mediated skin reactions compared to the chimeric monoclonal antibody, infliximab. We, however, report a case of Stevens-Johnson syndrome that required hospitalization and cessation of adalimumab in a patient with Crohn's disease (CD). In this case report, a 29-year-old male with colonic and perianal CD with associated erythema nodosum and large joint arthropathy developed severe mucositis, peripheral rash and desquamation, fevers and respiratory symptoms concomitant with a second dose of 40 mg adalimumab after a 2 mo break from adalimumab therapy. Skin biopsies of the abdominal wall confirmed erythema multiforme and the patient was on no other drugs and infective etiologies were excluded. The patient responded rapidly to IV hydrocortisone and was able to be commenced on infliximab without recurrence of the Stevens-Johnson syndrome. Desquamating skin reactions have now been described in three of the TNFalpha antagonists (infliximab, etanercept and adalimumab). These reactions can be serious and prescribers need to be aware of the potential mucocutaneous side effects of these agents, especially as Stevens-Johnson syndrome is associated with significant morbidity and mortality.

PMID:19764100


Use of mycophenolate mofetil in inflammatory bowel disease.
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AIM: To assess the efficacy and safety of mycophenolate mofetil (MMF) prospectively in inflammatory bowel disease (IBD) patients intolerant or refractory to conventional medical therapy. METHODS: Crohn's disease (CD) or ulcerative colitis/IBD unclassified (UC/IBDU) patients intolerant or refractory to conventional medical therapy received MMF (500-2000 mg bid). Clinical response was assessed by the Harvey Bradshaw index (HBI) or colitis activity index (CAI) after 2, 6 and 12 mo of therapy, as were steroid usage and adverse effects. RESULTS: Fourteen patients (9 CD/5 UC/IBDU; 8M/6F; mean age 50.4 years, range 28-67 years) were treated and prospectively assessed for their response to oral MMF. Of the 11 patients who were not in remission on commencing MMF, 7/11 (63.6%) achieved remission by 8 wk. All 3 patients in remission on commencing MMF maintained their remission. Ten patients were still on MMF at 6 mo with 9/14 (64.3%) in remission, while of 12 patients followed for 12 mo, 8 were in remission without dose escalation (66.7%). Three patients were withdrawn from the MMF due to drug intolerance. There were no serious adverse events attributed due to the medication. CONCLUSION: MMF demonstrated efficacy in the management of difficult IBD. MMF appeared safe, well tolerated and efficacious for both short and long-term therapy, without the need for dose escalation. Further evaluation of MMF comparing it to conventional immunosuppressants is required.

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Extracellular function of the actinremodelling protein flightless I may be important in acute wound responses.
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