BACKGROUND: There are few population-based data on long-term management of patients after coronary artery bypass graft (CABG), despite the high risk for future major vascular events among this group. We assessed the prevalence and correlates of pharmacotherapy for prevention of new cardiac events in a large population-based series.

METHODS: A postal survey was conducted of 2500 randomly selected survivors from a state population of patients 6 to 20 years after first CABG.

RESULTS: Response was 82% (n = 2061). Use of antiplatelet agents (80%) and statins (64%) declined as age increased. Other independent predictors of antiplatelet use included statin use (odds ratio [OR] 1.6, 95% CI 1.26-2.05) and recurrent angina (OR 1.6, CI 1.17-2.06). Current smokers were less likely to use aspirin (OR 0.59, CI 0.4-0.89). Statin use was associated with reported high cholesterol (OR 24.4, CI 8.4-32.4), management by a cardiologist (OR 2.3, CI 1.8-3.0), and the use of calcium channel-blockers. Patients reporting hypertension or heart failure, in addition to high cholesterol, were less likely to use statins. Angiotensin-converting enzyme inhibitors were the most commonly prescribed agents for management of hypertension (59%) and were more frequently used among patients with diabetes and those with symptoms of heart failure. Overall 42% of patients were on angiotensin-converting enzyme inhibitors and 36% on beta-blockers.

CONCLUSIONS: Gaps exist in the use of recommended medications after CABG. Lower anti-platelet and statin use was associated with older age, freedom from angina, comorbid heart failure or hypertension, and not regularly visiting a cardiologist. Patients who continue to smoke might be less likely to adhere to prescribed medications.

PMID:15199354

A prospective comparative study of ASCA and pANCA in Chinese and Caucasian IBD patients.

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BACKGROUND: Inflammatory bowel disease manifests throughout all ethnic groups. Antisaccharomyces cerevisiae (ASCA) and antineutrophil cytoplasmic antibodies (pANCA) can aid in the differentiation between Crohn’s disease (CD) and ulcerative colitis (UC), but their sensitivity may vary between races. OBJECTIVES: This study compared the sensitivity, specificity, and positive and negative predictive values (PPV, NPV) of pANCA and ASCA between Chinese and Caucasian IBD populations and identified disease subtype associations. RESULTS: Three hundred patients were prospectively recruited from Caucasian and Chinese populations (CD, n = 50, UC, n = 50, controls, n = 50 each). pANCA detection was greater in Caucasian than Chinese UC patients (p= 0.046). ASCA IgG detection was similar, but IgA was lower in Chinese CD patients (p < 0.001). Differentiation between UC and CD (+ve pANCA/-ve ASCA) demonstrated a PPV of 92% in isolated colonic disease. Logistic regression in CD identified positive pANCA had a lower association with ileal (OR = 6.8, p= 0.0067) and complicated disease (OR = 5.5, p= 0.015). Caucasian CD patients with positive ASCA IgA/IgG had a greater association with ileal (OR = 6.7, p= 0.022) or complicated disease (OR = 9.4, p= 0.0073) and in Chinese CD patients positive ASCA IgA/IgG was associated with isolated ileal disease (OR = 16.8, p= 0.032). Linear regression demonstrated that higher ASCA titers predicted complicated CD and isolated ileal disease. CONCLUSIONS: This study identified that pANCA is more sensitive in Caucasian than Chinese UC and that ASCA IgA has a low yield in Chinese CD. pANCA and ASCA are useful for differentiating between UC and CD in both populations, and ASCA IgG and IgA titers have potential use in determining the risk of developing complicated CD.

PMID:15555001
**Disposition of artesunate and dihydroartemisinin after administration of artesunate suppositories in children from Papua New Guinea with uncomplicated malaria.**  
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A detailed pharmacokinetic analysis was performed with 47 children from Papua New Guinea with uncomplicated falciparum or vivax malaria treated with artesunate (ARTS) suppositories (Rectocaps) given in two doses of approximately 13 mg/kg of body weight 12 h apart. Following an intensive sampling protocol, samples were assayed for ARTS and its primary active metabolite, dihydroartemisinin (DHA), by liquid chromatography-mass spectrometry. A population pharmacokinetic model was developed to describe the data. Following administration of the first dose, the mean maximal concentrations of ARTS and DHA were 1,085 nmol/liter at 0.9 h and 2,525 nmol/liter at 2.3 h, respectively. The absorption half-life for ARTS was 2.3 h, and the conversion half-life (ARTS to DHA) was 0.27 h, while the elimination half-life of DHA was 0.71 h. The mean common volumes of distribution for ARTS and DHA relative to bioavailability were 42.8 and 2.04 liters/kg, respectively, and the mean clearance values relative to bioavailability were 6 and 2.2 liters/h/kg for ARTS and DHA, respectively. Substantial interpatient variability was observed, and the bioavailability of the second dose relative to that of the first was estimated to be 0.72. The covariates age, sex, and alpha-thalassemia genotype were not influential in the pharmacokinetic model development; but the inclusion of weight as a covariate significantly improved the performance of the model. An ARTS suppositories dose of 10 of 20 mg/kg is appropriate for use in children with uncomplicated malaria.  
PMID:15273107

**Model for collecting colorectal cancer staging information in Western Australia.**  
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Background: There is recognition that to improve the management of patients with cancer we need to monitor outcomes, especially survival outcomes based on tumour stage. Unfortunately, there are few centres in Australia that can provide stage stratified survival information, despite the large investments that have been made in data collection. The aim of this study was to collect staging information for all colorectal cancers diagnosed in Western Australia over a 12-month period. This information could then serve as a basis for more meaningful analysis. Methods: A project officer was appointed to coordinate a programme through the Western Australian Cancer Registry. A consensus was reached among pathologists on the standardized reporting of colorectal cancers to the registry. Clinicians were asked to provide, on pathology request forms, information on tumour location, the presence of metastatic disease (on X-ray or at laparotomy), and type of surgery. Use was also made of existing hospital and unit based databases to acquire and crosscheck information. Results: Over a 12-month study period, 1008 patients with colorectal cancers were notified to the Cancer Registry. Their mean age was 69.1 years (range 23-100 years), 56% were men and 44% women. The rectum was the most common site for disease location (32.5%). At cessation of the project, 743 patients (74%) were fully staged, with a further 221 patients (22%) having completed data on tumour depth of penetration and nodal status, but insufficient information on the presence of metastases. The stage distributions were: stage I - 20.5%; stage II - 29.9%; stage III - 26.2%; stage IV - 23.4%. Conclusions: It is feasible to collect staging information on colorectal cancers notified to a population based cancer registry. This information will be invaluable for stage stratified survival analysis and research.  
PMID:2004486171
Indications for operative management of abdominal aortic aneurysms.
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The increasing incidence of abdominal aortic aneurysms, along with the more frequent use of screening techniques, has resulted in greater numbers of patients with small abdominal aortic aneurysms. The questions of frequency of surveillance and timing of intervention are the two most controversial issues faced by surgeons dealing with this condition. Most management decisions are based on the size of the aneurysm but other factors must also be considered. This review makes recommendations on the management of small abdominal aortic aneurysms according to the current available evidence. [References: 90]

Is screening for abdominal aortic aneurysm bad for your health and well-being?
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Background: The purpose of the present paper was to investigate whether screening for abdominal aortic aneurysm (AAA) causes health-related quality of life to change in men or their partners.
Methods: A cross-sectional case-control comparison was undertaken of men aged 65-83 years living in Perth, Western Australia, using questionnaires incorporating three validated instruments (Medical Outcomes Study Short Form-36, EuroQol EQ-5D and Hospital Anxiety and Depression Scale) as well as several independent questions about quality of life. The 2009 men who attended for ultrasound scans of the abdominal aorta completed a short prescreening questionnaire about their perception of their general health. Four hundred and ninety-eight men (157 with an AAA and 341 with a normal aorta) were sent two questionnaires for completion 12 months after screening, one for themselves and one for their partner, each being about the quality of life of the respondent. Results: Men with an AAA were more limited in performing physical activities than those with a normal aorta (t-test of means P = 0.04). After screening, men with an AAA were significantly less likely to have current pain or discomfort than those with a normal aorta (multivariate odds ratio: 0.5; 95% confidence interval (CI): 0.3-0.9) and reported fewer visits to their doctor. The mean level of self-perceived general health increased for all men from before to after screening (from 63.4 to 65.4). Conclusions: Apart from physical functioning, screening was not associated with decreases in health and well-being. A high proportion of men rated their health over the year after screening as being either the same or improved, regardless of whether or not they were found to have an AAA.

Impact of laparoscopic cholecystectomy on hospital utilization.
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OBJECTIVE: The objective of the present study was to assess the impact of laparoscopic cholecystectomy (LC) and associated endoscopic retrograde pancreatography (ERCP) on hospital utilization. BACKGROUND: Laparoscopic cholecystectomy (LC) has resulted in marked reductions in average length of hospital stay; but population-based studies of hospital utilization have generally not taken into account increased cholecystectomy rates or associated increases in pre and postoperative admissions. METHODS: We conducted a population-based study of all residents of Western Australia who underwent cholecystectomy in the period 1980-2000. Record linkage was used to identify pre and
postoperative admissions, and to estimate aggregate length of stay per case based on all relevant admissions. We estimated trends in cholecystectomy rates, proportions of cases with related pre and postoperative hospital admissions, average aggregate length of stay per case and total bed utilization per unit of population. RESULTS: The introduction of LC was associated with a sustained increase in rates of cholecystectomy of 25%. Similar increases occurred in the percentage of cases with related preoperative and postoperative admissions. Average length of stay for index admissions declined by nearly 60% compared with 50% for all related admissions. Per capita hospital utilization for index admissions decreased by 45% compared with 38% for index and associated admissions combined, and 32% for all admissions for biliary disease. CONCLUSIONS: Reduced hospital utilization associated with LC was partly offset by increases in pre and postoperative admissions and a sustained increase in cholecystectomy rates. Record linkage is required to assess the true impact of new technologies on hospital utilization.

PMID:15043732


Carotid endarterectomy in octogenarians.
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BACKGROUND: The role of carotid endarterectomy in octogenarians is unclear as this age group was not included in the major trials of carotid surgery. The aim of the present study was to determine the trends and early outcome of carotid endarterectomy performed in octogenarians at a single institution. METHODS: A retrospective review of all carotid endarterectomies performed between 1990 and 2001 was conducted as part of a clinical audit. Trends in procedure numbers, length of stay, age and early outcome were assessed. The results of octogenarians were analysed separately. RESULTS: Three hundred and fifty-nine carotid endarterectomies were performed in 329 patients including 33 octogenarians. The number of cases and the mean age of patients increased and length of stay decreased during the study period. There was a significant increase in the proportion of octogenarians undergoing carotid endarterectomy (P = 0.03) in the second half of the study period. The combined rate of stroke and death was higher in octogenarians compared with patients under 80 years old, but the difference was not statistically significant (8.8%vs 5.8%; P = 0.59). CONCLUSION: The mean age of patients and the proportion of octogenarians undergoing carotid endarterectomy has increased over the 12-year study period.

PMID:15043730


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INTRODUCTION: Correct ligamentous balancing is an important determinant of the clinical outcome in total knee arthroplasty (TKA). Many surgeons prefer a tight rather than a lax knee during implantation of a TKA. The hypothesis in this study was that patients with a slightly laxer knee joint might perform better than patients with a tight knee joint after implantation of a TKA. PATIENTS AND METHODS: Twenty-two patients with bilateral knee arthroplasties were clinically and radiologically evaluated at a mean follow-up of 4.5 years, ranging from 2 to 7 years. There were 12 women and 10 men with an average age of 68.9 years (range 32-82 years) at the time of surgery. A modified HSS score (excluding laxity), varus and valgus stress X-rays in 30 degrees of knee flexion, and the subjective outcome of both knees were compared. A knee was considered tight when it opened less than 4 degrees and lax if it opened 4 degrees or more on stress X-ray. RESULTS: There was a trend
towards improved range of motion and HSS score for the laxer knee joints. However, the difference
did not achieve statistical significance. Eleven of the 22 patients considered one side subjectively
better than the other side. In 10 out of these 11 TKA, the slacker knee joint was the preferred side (p<0.05).
CONCLUSIONS: As the present study compared bilateral knee joints after TKA, the same
patient could act as a control group, and subtle subjective differences were revealed which are not
quantifiable. The results showed that patients with a preferred side felt significantly more comfortable
on the laxer side, indicating that during intraoperative ligamentous tensioning, some varus and valgus
laxity at 20-30 degrees of flexion might be preferable to an over-tight knee joint. Further biomechanical
and prospective investigations will be necessary to establish the correct soft-tissue tensioning.
PMID:15156332

**Multicenter, prospective, double-blind, randomized trial of laparoscopic nissen vs anterior 90
degrees partial fundoplication.**
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**HYPOTHESIS:** Laparoscopic anterior 90 degrees partial fundoplication for gastroesophageal reflux is
associated with a lower incidence of postoperative dysphagia and other adverse effects compared
with laparoscopic Nissen fundoplication. **DESIGN:** A multicenter, prospective, double-blind,
randomized controlled trial. **SETTING:** Nine university teaching hospitals in 6 major cities in Australia
and New Zealand. **PARTICIPANTS:** One hundred twelve patients with proven gastroesophageal reflux
disease presenting for laparoscopic fundoplication were randomized to undergo either a Nissen (52
patients) or an anterior 90 degrees partial procedure (60 patients). Patients with esophageal motility
disorders, patients requiring a concurrent abdominal procedure, and patients who had undergone
previous antireflux surgery were excluded from this study. **INTERVENTIONS:** Laparoscopic Nissen
fundoplication with division of the short gastric vessels or laparoscopic anterior 90 degrees partial
fundoplication. **MAIN OUTCOME MEASURES:** Independent assessment of dysphagia, heartburn, and
overall satisfaction 1, 3, and 6 months after surgery using multiple clinical grading systems. Objective
measurement of esophageal manometric parameters, esophageal acid exposure, and endoscopic
assessment. **RESULTS:** Postoperative dysphagia, and wind-related adverse effects were less
common after a laparoscopic anterior 90 degrees partial fundoplication. Relief of heartburn was better
following laparoscopic Nissen fundoplication. Overall satisfaction was better after anterior 90 degrees
partial fundoplication. Lower esophageal sphincter pressure, acid exposure, and endoscopy findings
were similar for both procedures. **CONCLUSIONS:** At the 6-month follow-up, laparoscopic anterior 90
degrees culine partial fundoplication is followed by fewer adverse effects than laparoscopic Nissen
fundoplication with full fundal mobilization, and it achieves a higher rate of satisfaction with the overall
outcome. However, this is offset to some extent by a greater likelihood of recurrent gastroesophageal
reflux symptoms.
PMID:15545560

**Infrarenal aortic diameter predicts all-cause mortality.**
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**OBJECTIVE:** To assess the relationship between infrarenal aortic diameter and subsequent all-cause
mortality in men aged 65 years or older. **METHODS AND RESULTS:** Aortic diameter was measured
using ultrasound in 12 203 men aged 65 to 83 years as part of a trial of screening for abdominal aortic
aneurysms. A range of cardiovascular risk factors was also documented. Mortality over the next 3 to 7
years was assessed using record linkage. Initial aortic diameter was categorized into 10 intervals, and
the relationship between increasing diameter and subsequent mortality was explored using Cox proportional hazard models. Median diameter increased from 21.4 mm in the youngest men to 22.1 mm in the oldest men. The cumulative all-cause mortality increased in a graded fashion with increasing aortic diameter. Using the diameter interval 19 to 22 mm as the reference, the adjusted hazard ratio for all-cause mortality increased from 1.26 (95% CI: 1.09, 1.44; P=0.001) for aortic diameters of 23 to 26 mm to 2.38 (95% CI: 1.22, 4.61; P=0.011) for aortic diameters of 47 to 50 mm. Analysis of causes of death indicated that cardiovascular disease was an important contributor to this increase. CONCLUSIONS: Infrarenal aortic diameter is an independent marker of subsequent all-cause mortality.


**Oral health of aged inpatients.**
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Objectives: The proportion of the population aged 65 years and over in Australia is expected to increase substantially, and more people in this age group are retaining their teeth and will require dental care. The objective of this study was to assess the oral health status of inpatients over the age of 65. Methods: Dental examinations were performed on inpatients at Fremantle Hospital. Standardized assessment forms were used to investigate factors related to medical history, hospital admission and oral health needs. Results: A total of 104 persons were examined, 56% were dentate. The dentate participants had an average decayed, missing and filled (DMF)-index of 21.6 (SD 7.1). All edentulous participants had dentures and the estimated average age of their dentures was 18.1 years. Although the majority of participants (70.2%) were satisfied with their oral health status, 76.6% were professionally assessed to be in need of immediate dental care. Among the edentulous participants, 47.1% needed new dentures. Among all the participants, 75.3% also needed improved oral hygiene. Conclusion: There is a need to fully assess availability, appropriateness and effectiveness of models of oral health care delivery among the older population. This study clearly indicates a current problem and high levels of unmet need. With an increasing ageing population and higher retention levels of natural dentitions, this will result in higher levels of oral disease and need for prevention and care.

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PMID:Peer Reviewed Journal: 2008-14768-003


**Identification and staging of pancreatic tumours using computed tomography, endoscopic ultrasound and mangafodipir trisodium-enhanced magnetic resonance imaging.**
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Pancreatic malignancy can be staged by a number of different investigations, either alone or in combination. The purpose of the present study was to compare the use of endoscopic ultrasound, CT and mangafodipir trisodium-enhanced MRI for the staging of pancreatic malignancy, particularly with respect to determining resectability prior to surgery. Twenty-seven patients referred for the
investigation of a suspected pancreatic malignancy were entered into the trial. All patients had contrast-enhanced CT, gadolinium and mangafodipir trisodium-enhanced MRI, and endoscopic ultrasound (EUS). Images were assessed for nodal staging, tumour staging and resectability for each investigation, and the results compared with findings at surgery. The results for the accuracy of MRI, CT and EUS, in detecting T4 disease versus T3 or lower was 78, 79 and 68%, respectively; nodal involvement was 56, 63 and 69%, respectively; and overall resectability (including the T stage, presence of involved nodes and metastases) was 83, 76 and 63%, respectively. There was no significant difference demonstrated between the three tests. The present study suggests that for patients referred for investigation and staging of pancreatic malignancy, EUS and MRI scanning convey little advantage over contrast-enhanced CT. Furthermore, although mangafodipir trisodium improved the conspicuity of pancreatic tumours, it has little influence on T staging.
PMID:15230749


Shockling abdominal trauma: review of an uncommon disorder of small intestine perfusion.
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'Shock bowel' is a rare disorder of gastrointestinal physiology with characteristic radiological features. It usually occurs in the setting of blunt abdominal trauma and hypovolaemia, with complete reversibility of these findings following resuscitation. We present a case demonstrating the classic features of this complex of imaging findings thought to be caused by end-organ hypoperfusion.
PMID:15027926


What determines compulsory community treatment? A logistic regression analysis using linked mental health and offender databases.
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OBJECTIVE: Western Australia has one of the highest published rates of the use of compulsory treatment orders in the English-speaking world. Differences in patient characteristics, legislation and service setting may explain variations in the reported efficacy of compulsory community treatment. Our objective is to investigate predictors of Community Treatment Orders (CTO) placement in the first year of implementation in Western Australia and see if there were any differences in the type of patients placed on these orders compared to other studies. METHOD: A population-based record linkage study of Mental Health and Offender Databases comparing 265 patients on CTOs with a consecutive control group (CCG) of equal number matched on date of discharge from inpatient care or CTO placement. RESULTS: Previous health service use, after-care placement, mental disorder history including schizophrenic history, a positive forensic history of violence to others as well as patient's marital status were the significant predictors of CTO placement. CONCLUSIONS: Studies of compulsory community treatment appear to be of similar populations. In spite of the comparatively high rate of use, psychiatrists in Western Australia do not appear to be applying community treatment orders to different types of patient compared to elsewhere. We need further research to establish the relative contribution of patient characteristics, legislation and service setting toward the use and outcome of compulsory community treatment.
PMID:15298583
Managing chronic pain through cognitive change and multidisciplinary treatment program.
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(from the journal abstract) A program for enhancing the management of patients presenting with chronic pain is described, using a prospective controlled cohort study. The participants were 152 outpatients referred to a tertiary centre pain clinic. Intervention consisted of a cognitive behavioural program aimed at improving mood, functional capacity, and quality of life. Data from outcome measures were obtained before and after treatment and compared with data obtained from 48 waitlisted patients. Multivariate analysis of variance demonstrated a significant statistical difference between treated patients and controls as a result of the program, although clinical improvement was modest. (PsycINFO Database Record (c) 2005 APA, all rights reserved).
PMID:2004-21752-003

The androgen receptor mRNA.
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Androgens (testosterone), acting via the androgen receptor (AR) a nuclear transcription factor, regulate male sexual development and body composition. In addition, AR expression plays an important role in the proliferation of human prostate cancer and confers a better prognosis in breast cancer. AR mRNA stability is central to the regulation of AR expression in prostate and breast cancer cells, and recent studies have demonstrated binding by members of the ELAV/Hu and poly(C) RNA-binding protein families to a highly conserved UC-rich element in the 3'-untranslated region of AR mRNA, with functional impact on AR protein expression. Remarkably, a CAG trinucleotide repeat in exon 1 of the AR, the length of which has been linked to prostate cancer survival, is also a target for multiple RNA-binding proteins from a variety of human and murine tissues. In this review, we will detail the current knowledge of the mechanisms involved in regulating AR mRNA stability, the nature, potential role and structural biology of several novel AR mRNA-protein interactions, and the implications for novel therapeutics in human prostate cancer. Copyright 2004 Wiley Periodicals, Inc.
[References: 98]
PMID:15170865

Real-time quantitative PCR analysis can be used as a primary screen to identify patients with CML treated with imatinib who have BCR-ABL kinase domain mutations.
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Mutations within the BCR-ABL kinase domain in imatinib-treated chronic myeloid leukemia (CML) are the main mechanism of acquired resistance. The early detection of mutations should provide clinical benefit by allowing early intervention. Quantitative polymerase chain reaction (RQ-PCR) results of BCR-ABL mRNA were correlated with mutation analysis in 214 patients treated with imatinib. We determined whether there was a difference in the incidence of mutations between the patients with a more than 2-fold rise in BCR-ABL and patients with stable or decreasing levels. Of the 56 patients with a more than 2-fold rise, 34 (61%) had detectable mutations (median rise, 3.0-fold; 25th-75th
percentiles, 2.3-5.2). In 31 (91%) of these 34 patients, the mutation was present at the time of the rise and became detectable within 3 months in the remaining patients. Only 1 (0.6%) of 158 patients with stable or decreasing BCR-ABL levels had a detectable mutation, P less than .0001. Thus, a more than 2-fold rise identified 34 (97%) of 35 patients with a mutation. We conclude that a rise in BCR-ABL of more than 2-fold can be used as a primary indicator to test patients for BCR-ABL kinase domain mutations.

PMID:15256429


Nontransferrin-bound iron uptake by hepatocytes is increased in the Hfe knockout mouse model of hereditary hemochromatosis.
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Hereditary hemochromatosis (HH) is an iron-overload disorder caused by a C282Y mutation in the HFE gene. In HH, plasma nontransferrin-bound iron (NTBI) levels are increased and NTBI is bound mainly by citrate. The aim of this study was to examine the importance of NTBI in the pathogenesis of hepatic iron loading in Hfe knockout mice. Plasma NTBI levels were increased 2.5-fold in Hfe knockout mice compared with control mice. Total ferric citrate uptake by hepatocytes isolated from Hfe knockout mice (34.1 +/- 2.8 pmol Fe/mg protein/min) increased by 2-fold compared with control mice (17.8 +/- 2.7 pmol Fe/mg protein/min; P < .001; mean +/- SEM; n = 7). Ferrous ion chelators, bathophenanthroline disulfonate, and 2',2-bipyridine inhibited ferric citrate uptake by hepatocytes from both mouse types. Divalent metal ions inhibited ferric citrate uptake by hepatocytes, as did diferric transferrin. Divalent metal transporter 1 (DMT1) mRNA and protein expression was increased approximately 2-fold by hepatocytes from Hfe knockout mice. We conclude that NTBI uptake by hepatocytes from Hfe knockout mice contributed to hepatic iron loading. Ferric ion was reduced to ferrous ion and taken up by hepatocytes by a pathway shared with diferric transferrin. Inhibition of uptake by divalent metals and up-regulation of DMT1 expression suggested that NTBI uptake was mediated by DMT1. (C) 2004 by The American Society of Hematology.
PMID:2004377309


Population based randomised controlled trial on impact of screening on mortality from abdominal aortic aneurysm.[see comment][erratum appears in BMJ. 2005 Mar 12;330(7491):596].
Norman PE, Jamrozik K, et al.
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OBJECTIVE: To assess whether screening for abdominal aortic aneurysms in men reduces mortality. DESIGN: Population based randomised controlled trial of ultrasound screening, with intention to treat analysis of age standardised mortality. SETTING: Community based screening programme in Western Australia. PARTICIPANTS: 41,000 men aged 65-83 years randomised to intervention and control groups. INTERVENTION: Invitation to ultrasound screening. MAIN OUTCOME MEASURE: Deaths from abdominal aortic aneurysm in the five years after the start of screening. RESULTS: The corrected response to invitation to screening was 70%. The crude prevalence was 7.2% for aortic diameter > or = 30 mm and 0.5% for diameter > or = 55 mm. Twice as many men in the intervention group than in the control group underwent elective surgery for abdominal aortic aneurysm (107 v 54, P = 0.002, chi2 test). Between scheduled screening and the end of follow up 18 men in the intervention group and 25 in the control group died from abdominal aortic aneurysm, yielding a mortality ratio of 0.61 (95% confidence interval 0.33 to 1.11). Any benefit was almost entirely in men aged between 65 and 75 years, where the ratio was reduced to 0.19 (0.04 to 0.89). CONCLUSIONS: At a whole
Population level screening for abdominal aortic aneurysms was not effective in men aged 65-83 years and did not reduce overall death rates. The success of screening depends on choice of target age group and the exclusion of ineligible men. It is also important to assess the current rate of elective surgery for abdominal aortic aneurysm as in some communities this may already approach a level that reduces the potential benefit of population based screening.

PMID:15545293

Comparison of gentamicin dose estimates derived from manual calculations, the Australian 'Therapeutic Guidelines: Antibiotic' nomogram and the SeBA-GEN and DoseCalc software programs.

Mohan M, Batty KT, et al.

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Aim: To compare gentamicin dose estimates from four predictive methods. Methods: A retrospective study was conducted, comprising patients at Fremantle Hospital who received gentamicin therapy and had at least one gentamicin serum concentration reported. A manual calculation method, the Australian 'Therapeutic Guidelines: Antibiotic' (TGA) nomogram and the SeBA-GEN and DoseCalc software packages were compared. SeBA-GEN dose estimates were regarded as the reference standard. Results: There were 64 males and 30 females with mean age of 58 +/- 16 years. In patients with moderate renal impairment (CL<sub>Cr</sub> = 30-60 ml min<sup>-1</sup>; n = 21), mean dose estimates using DoseCalc and the manual calculation method were comparable to SeBA-GEN but the mean TGA nomogram dose (230 mg; 95% confidence interval 179, 281) was significantly lower than SeBA-GEN (286 mg; 261, 311; P = 0.002; one-way RM ANOVA). In patients with mild renal impairment (CL<sub>Cr</sub> = 60-90 ml min<sup>-1</sup>; n = 48), DoseCalc (392 mg; 367, 427) was comparable to SeBA-GEN (377 mg; 362, 392). Although the manual method (341 mg; 306, 376; P = 0.007) and the TGA nomogram (335 mg; 302, 368; P < 0.001) estimates were significantly lower than SeBA-GEN, the practical difference was modest. Conclusions: SeBA-GEN and DoseCalc are generally comparable for estimation of gentamicin doses in patients with renal impairment. The 'Therapeutic Guidelines: Antibiotic' nomogram is a valid approach to dosage estimation, but only when used in patients with normal renal function. Simple manual calculations are a suitable alternative in patients with renal impairment.

PMID:2004501837

Safety evaluation of fixed combination piperaquine plus dihydroartemisinin (Artekin) in Cambodian children and adults with malaria.

Karunajeewa H, Lim C, et al.

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Aims: To assess the haemodynamic, electrocardiographic and glycaemic effects of piperaquine-dihydroartemisinin (Artekin) fixed combination therapy in uncomplicated malaria. Methods: Sixty-two Cambodians (32 children and 30 adults) with falciparum or vivax malaria were given Artekin given as four age-based oral doses over 32 h. Supine and erect blood pressure, the electrocardiographic QT interval and plasma glucose were measured before treatment and then at regular intervals during a 4-day admission period as part of efficacy and safety monitoring. QT intervals were rate-corrected (QTc) using Bazett's formula. Results: Artekin therapy was well tolerated and all patients responded to treatment. Average parasite and fever clearance times were 19 and 12 h, respectively. The pretreatment mean fall in systolic blood pressure on standing was 8 +/- 6 mmHg and 6-hourly measurements over 72 h showed no significant change (P = 0.48). There was a significant lengthening of the mean QTc to a maximum of 11 ms(0.5) (95% confidence interval 4-18 ms(0.5))
relative to baseline at 24 h (P = 0.003). The maximal QTc prolongation observed in any patient was 53 ms (0.5). There was a mean 0.4 mmol l(-1) reduction in the post-absorptive plasma glucose during the first 48 h but no episodes of hypoglycaemia (plasma glucose < 3.0 mmol l(-1)) were observed at any time. CONCLUSIONS: Artekin is safe and effective combination therapy for uncomplicated malaria in children and adults. Although piperaquine is a long half-life drug related to other quinoline compounds including chloroquine and quinine, no clinically significant cardiovascular or metabolic effects were observed.

PMID:14678346


A novel high-amylose barley cultivar (Hordeum vulgare var. Himalaya 292) lowers plasma cholesterol and alters indices of large-bowel fermentation in pigs.

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Hordeum vulgare var. Himalaya 292 is a new barley cultivar with altered starch synthesis and less total starch but more amylose, resistant starch (RS) and total and soluble NSP including beta-glucan. To determine its nutritional potential, young pigs were fed diets containing stabilised wholegrain flours from either Himalaya 292, Namoi (a commercial barley), wheat bran or oat bran at equivalent dietary NSP concentrations for 21 d. Serum total cholesterol was significantly lowered by the Himalaya 292 diet relative to wheat bran, indicating that Himalaya 292 retained its hypocholesterolaemic potential. In all groups SCFA concentrations were highest in the proximal colon and decreased towards the rectum. Digesta pH was lowest in the proximal colon and highest in the distal colon. Large-bowel and faecal pH were significantly lower in the pigs fed the barley and oat diets, indicating greater bacterial fermentation. Caecal and proximal colonic pH was lowest and SCFA pools highest in the pigs fed Himalaya 292. Total and individual SCFA were lowest in the mid- and distal colon of the pigs fed Himalaya 292 or oat bran. These data suggest the presence of more RS in Himalaya 292 and suggest that its fermentation was rapid relative to transit. Differences in faecal and large-bowel anaerobic, aerobic, coliform and lactic acid bacteria were relatively small, indicating a lack of a specific prebiotic action. These data support the potential of this novel barley cultivar to improve health through plasma cholesterol reduction and increased large-bowel SCFA production.

PMID:15522129


Impact of compulsory community treatment on admission rates: survival analysis using linked mental health and offender databases.[see comment].

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BACKGROUND: There is controversy as to whether compulsory community treatment for psychiatric patients reduces hospital admission rates. AIMS: To examine whether community treatment orders (CTOs) reduce admission rates, using a two-stage design of matching and multivariate analyses to take into account socio-demographic factors, clinical factors, case complexity and previous psychiatric and forensic history. METHOD: Survival analysis of CTO cases and controls from three linked Western Australian databases of health service use, involuntary treatment and forensic history. We used two control groups: one matched on demographic characteristics, diagnosis, past psychiatric history and treatment setting, and consecutive controls matched on date of discharge from in-patient care. RESULTS: We matched 265 CTO cases with 265 matched controls and 224 consecutive controls (total n=754). The CTO group had a significantly higher readmission rate: 72% v. 65% and 59% for the matched and consecutive controls (log-rank chi(2)=4.7, P=0.03). CTO placement, aboriginal ethnicity, younger age, personality disorder and previous health service use were associated with increased admission rates. CONCLUSIONS: Community treatment orders alone do
Sexual health in women following pelvic surgery for rectal cancer.

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BACKGROUND: Sexual dysfunction is a recognized complication in men undergoing pelvic surgery for rectal cancer. There is, however, little information on the influence of such surgery on sexual health in women. The aim of this study was to evaluate sexual health in women undergoing pelvic surgery for rectal cancer. METHODS: The study group included women who underwent pelvic surgery for rectal cancer at the Colorectal Surgical Unit, Fremantle Hospital between 1996 and 2002. The patients were contacted by telephone and invited to complete an anonymized questionnaire on sexual health. A control group comprised women who had undergone surgery for colonic cancer during the same interval. RESULTS: Fifty women in the study group were contacted, of whom 22 completed questionnaires. Sixty-two women in the control group were contacted and 19 completed questionnaires. Women in the study group were significantly younger than those in the control group. Compared with those in the control group, women who had undergone pelvic surgery were significantly more likely to feel less attractive, feel that the vagina was either too short or less elastic during intercourse, experience superficial pain during intercourse, and complain of faecal soiling during intercourse. Women in the study group were concerned that these limitations would persist for the rest of their lives. There were no differences between the two groups in relationship to sexual arousal or libido. CONCLUSION: Pelvic surgery for rectal cancer has a significant influence on sexual health in women. Copyright 2004 British Journal of Surgery Society Ltd.

Bypass surgery mortality is blunt measure of performance.

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C-reactive protein levels and the expansion of screen-detected abdominal aortic aneurysms in men.

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BACKGROUND: C-reactive protein (CRP) levels have been shown to predict a number of cardiovascular outcomes. CRP levels have also been found to be elevated in patients with abdominal aortic aneurysms (AAAs). The aim of this study was to assess the relation between CRP levels and rates of expansion of small AAAs. METHODS AND RESULTS: A cohort of men with small aneurysms was identified in a trial of screening with ultrasound scanning. After initial screening, men were rescanned at 6- to 12-month intervals. CRP levels were measured at the first follow-up visit. Rates of expansion and risk factors for expansion were assessed with the use of data from 545 men who attended for at least 1 scan after CRP levels were measured. These men were followed for a median of 48 (range, 5 to 69) months. The mean annual rate of expansion was 1.6 mm. The median CRP level was 2.6 mg/L in men with the smaller AAAs (30 to 39 mm, n=433) compared with 3.5 mg/L in
men with larger AAAs (40 to 54 mm, n=112) (P=0.007). The multivariate age-adjusted logistic model confirmed initial aortic diameter to be the only factor associated with rapid expansion with an odds ratio of 7.2 (95% CI, 4.3,12.2) for an initial diameter of 40 to 54 mm relative to one of 30 to 39 mm. CONCLUSIONS: Most small aneurysms expand slowly. CRP levels are elevated in larger aneurysms but do not appear to be associated with rapid expansion. The most useful predictor of aneurysmal expansion in men is aortic diameter.

PMID:15302791

Clinical & Experimental Allergy. 2004; 34(5): 792-800.
In vitro testing to diagnose venom allergy and monitor immunotherapy: a placebo-controlled, crossover trial.
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BACKGROUNfD: In people with a history of sting allergy, only prior reaction severity and older age are known to predict subsequent reaction risk. Furthermore, no diagnostic test other than a deliberate sting challenge has been found to identify people in whom venom immunotherapy (VIT) has been unsuccessful. OBJECTIVE: We aimed to assess the utility of a number of in vitro tests to diagnose venom allergy and to monitor immunotherapy. METHODS: During a double-blind randomized placebo-controlled crossover trial of Myrmecia pilosula ant VIT the following venom-specific tests were performed at enrolment, and at completion of treatment prior to a diagnostic sting challenge; leucocyte stimulation index (SI), IL-4 production, IgE RAST, histamine release test (HRT), leukotriene release test (LRT) and basophil activation test (BAT). Intradermal venom skin testing (VST) was also performed at trial entry. RESULTS: Only VST and HRT identified those at risk of sting anaphylaxis in the placebo group. Although IgE RAST, leucocyte SI and IL-4 production, LRT and BAT all correlated well with intradermal VSTs, they did not predict sting challenge outcome. After successful VIT, venom-induced leucocyte IL-4 production tended to fall, whereas IgE RAST increased and a natural decline in HRT reactivity was reversed. A confounding seasonal affect on laboratory results was suspected. CONCLUSION: The HRT warrants further assessment for diagnosis of venom allergy. Uninformative performance of the commercially available LRT and BAT tests may be due to pre-incubation with IL-3. None of the tests evaluated appear to be reliable markers of successful VIT.
PMID:15144473

Open wedge high tibial osteotomy: biomechanical investigation of the modified Arthrex Osteotomy Plate (Puddu Plate) and the TomoFix Plate.
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OBJECTIVE: To determine the biomechanical properties of different fixation methods for high tibial medial opening wedge osteotomy in order to determine appropriate surgical and rehabilitation guidelines. DESIGN: A biomechanical testing examined the construct stiffness and the fixation strength of two different plates. BACKGROUND: Although medial opening wedge techniques for high tibial osteotomies have become popular in recent years, biomechanical data of frequently used implants is lacking. METHODS: A 15-mm medial opening gap was stabilized in each of eight medium composite tibial bones either with the modified Arthrex Osteotomy Plate (Puddu Plate) or the TomoFix Plate. RESULTS: Both constructs failed under compression and torsion at the lateral cortex and occurred at higher maximal forces by using the TomoFix Plate. After fracture of the lateral cortex the axial stiffness was reduced by 47% and the torsional rigidity by 54% for the TomoFix. For the Puddu Plate these reductions were 66% and 78%, respectively. The differences between the two groups were significant in all conducted tests (P < 0.05). CONCLUSIONS: This study indicates that an
unharmed lateral hinge largely dictates the stability after high tibial osteotomy. If the lateral cortex is injured, the TomoFix plate provides superior stability in both compression and torsion compared to the Puddu Plate. In the latter case additional fixation might be considered. RELEVANCE: These biomechanical tests helped to identify clinical situations in which the mechanical attributes of the plates would prove advantageous.


Prevalence and clinical correlates of disinhibition in dementia.
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OBJECTIVE AND METHODS: The phenomenology, main clinical correlates, and long-term evolution of disinhibition in dementia are not well known. To examine this issue, we studied a consecutive series of 272 patients with probable Alzheimer disease using a comprehensive psychiatric and neuropsychological evaluation that included the Disinhibition Scale. A subset of patients was reexamined with the same instruments between 1 and 4 years after the initial evaluation. RESULTS: A factor analysis of the Disinhibition Scale demonstrated 4 factors: (1) abnormal motor behavior, (2) hypomania, (3) loss of insight and egocentrism, and (4) poor self-care. Disinhibition was significantly associated with major and dysthymic depression, more severe negative symptoms, and loss of awareness. Most patients with disinhibition at the initial evaluation still showed disinhibition at follow-up, whereas 23% of patients without disinhibition at the initial evaluation developed disinhibition at follow-up. CONCLUSIONS: Disinhibition is a frequent and long-lasting problem in dementia. Our study demonstrates that the construct of disinhibition consists of 4 independent subsyndromes, each of which may have specific underlying mechanisms.


Volunteerism: 'community mothers' in action.
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Volunteers represent a growing, but often undervalued, section of service delivery in many areas in the community, particularly in health care. This paper is centred on volunteers' perceptions and experiences of home visiting gained through the implementation of the Community Mothers (CM) program in Western Australia (WA). Further, the paper aims to inform debate about the issue of professional versus non-professional home visitors and offers a perspective on the issue that may provide direction for policy makers and practitioners. This qualitative study involved individual telephone interviews with a volunteer sample of 12 participants, purposefully selected. Transcription data from each interview were examined and coded utilising an adapted method of content analysis described by Burnard (1991). Three main themes emerged in the findings as to why volunteers became involved in the Community Mothers Program: (1) Empathetic concern; (2) Contribution to community life; and (3) Lifecourse issues and personal development. With experiences of volunteers in home visiting, four main themes reflected the participants' views: (1) Facilitating client empowerment; (2) Facilitating personal empowerment; (3) Promoting social connectedness; and (4) Enabling goal setting. Although programs such as the Community Mothers Program aim to benefit and support mothers in the parenting role it is clear that there are benefits that emerge also for the individual volunteer, such as increased self-esteem, self-efficacy and satisfaction. Hence, measuring the overall outcomes that result from such program remains a major challenge.

PMID:15475127

PMID:15536301

PMID:2005075336
Changing focus of practice for community health nurses: advancing the practice role.
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Many parents lack support in their parenting role that was once provided through extended families and community structures. Thus, some new parents experience high levels of stress and low self-esteem associated with the challenges of parenting. The lack of support also results in family discord and breakdown with the family environment having the potential to adversely impact children's mental and physical wellbeing and development. The Community Mothers Program (CMP) was initially developed in England and offers support to families during the first year of parenting. The program aims to provide parents with the support once experienced from within the extended family. It also aims to enrich community development by building the capacity of community members living in local communities to support parents. This paper describes the impact of the CMP when implemented into Western Australian as well as the changes to the professional practice role of community child health nurses involved in the program. The Community Mothers Program has proved to be very successful. The success is attributed to the partnership model established between community members, parents, and child health nurses.

PMID:15125103

Screening for hemochromatosis: patients with liver disease, families, and populations.
[Review] [51 refs].
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Hereditary hemochromatosis is a common autosomal-recessive disorder of iron overload usually occurring in individuals who are homozygous for a C282Y mutation in the hemochromatosis (HFE) gene. Current screening methods can detect affected individuals early in disease pathogenesis, enabling early institution of effective treatment that can restore normal life expectancy. Phenotypic screening of adults using transferrin saturation and serum ferritin levels identifies the majority of individuals who develop iron overload. HFE genotyping, when combined with serum biochemical measurements, has reduced reliance on liver biopsy as a diagnostic tool and is the preferred initial screening modality for families with an affected individual. Genetic testing has altered previously held views regarding the high level of penetrance of the disease. Although the majority of C282Y homozygotes develop increased body iron stores, end-organ damage occurs much less frequently than previously thought. Screening is recommended in high-risk groups and in those with a high index of clinical suspicion. Opportunistic screening during routine health assessments may also be recommended. However, large-scale screening of the average-risk population is not recommended on the basis of current evidence. [References: 51]

PMID:14720453

Glycemic exposure is associated with reduced pulmonary function in type 2 diabetes: the Fremantle Diabetes Study.
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OBJECTIVE: To examine prospectively the relationship between diabetes, glycemic control, and spirometric measures. RESEARCH DESIGN AND METHODS: From a community-based cohort, 495 Europid (i.e., of European descent) patients with type 2 diabetes who had no history of pulmonary
disease underwent baseline spirometry between 1993 and 1994. A subset of 125 patients was
restudied a mean of 7.0 years later. The main outcome measures included forced vital capacity (FVC),
forced expiratory volume in 1 s (FEV1), vital capacity (VC), and peak expiratory flow (PEF) corrected
for body temperature, air pressure, and water saturation and were expressed either in absolute terms
or as percentage-predicted value for age, sex, and height. RESULTS: Mean percentage-predicted
values of each spirometric measure were decreased >10% in the whole cohort at baseline and
absolute measures continued to decline at an annual rate of 68, 71, and 84 ml/year and 17 l/min for
FVC, FEV1, VC, and PEF, respectively, in the 125 prospectively studied patients. Declining lung
function measures were consistently predicted by poor glycemic control in the form of a higher
updated mean HbA1c, follow-up HbA1c, or follow-up fasting plasma glucose. In a Cox proportional
hazards model, decreased FEV1 percentage-predicted value was an independent predictor of all-
cause mortality. CONCLUSIONS: Reduced lung volumes and airflow limitation are likely to be chronic
complications of type 2 diabetes, the severity of which relates to glycemic exposure. Airflow limitation
is a predictor of death in type 2 diabetes after adjusting for other recognized risk factors.
PMID:14988297

Silent myocardial infarction and its prognosis in a community-based cohort of Type 2 diabetic
patients: The Fremantle Diabetes Study.
Davis TME, Fortun P, et al.
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Aims/hypothesis. Our study investigated the prognosis of Type 2 diabetic patients with silent
myocardial infarction in a community-based cohort. Methods. We analysed data from 1269 patients
with Type 2 diabetes mellitus from a community-based observational study of diabetes care, control
and complications. Silent myocardial infarction was defined as Q waves (Minnesota codes 1.1, 1.2) on
a baseline electrocardiogram in the absence of a history or symptoms of CHD. Results. Silent
myocardial infarction was present in 3.9% of patients, or 44% of all Q-wave myocardial infarctions.
The patients were subdivided into those with (i) no clinical or Q-wave evidence of myocardial infarction
(Group 1), (ii) silent myocardial infarction (Group 2), (iii) self-reported CHD but no Q waves (Group 3),
and (iv) self-reported CHD and Q waves (Group 4). Compared to Groups 3 and 4, Group 2 patients
were more likely to be women, less likely to have smoked, and had higher serum HDL-cholesterol
concentrations and higher blood pressure. Over an average of seven years, and after adjusting for
other independent predictors of death, all-cause and CHD mortality were similar in Groups 1 and 2
and greater (twofold for all-cause and fourfold for CHD mortality) in Groups 3 and 4.
Conclusions/interpretation. Silent myocardial infarction is common in Type 2 diabetes and has a
prognosis similar to that in patients without a history of CHD or Q waves.
PMID:2004171776

Review of survival curves for colorectal cancer.
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PURPOSE: Actuarial and Product Limited (i.e., Kaplan-Meier) estimates of survival are commonly
used in the literature to describe outcomes in patients treated for cancer. Terms such as cancer-
specific and cancer-free survival are frequently quoted, although often without clear definitions. This
study was designed to compare survival estimates using the Kaplan-Meier method on the same
population of patients but using different definitions of what constitutes an event. This was to highlight
some of the variation that can occur when different techniques are used to perform these calculations.
METHODS: Data were obtained from a prospective database that had recorded all patients presenting
with colorectal cancer from 1996 to 2002. Using this information, we calculated the 1) overall (all-cause mortality), 2) cancer-specific, 3) cancer-free, 4) recurrence-free, and 5) relative survival (and 95 percent confidence intervals) at five years postpresentation. RESULTS: The study included 497 patients with a mean age of 68 years, and a male-to-female ratio of 1.3:1. They were followed for a mean of 2.2 years (standard deviation, +/-1.1), with 50 patients (10.1 percent) followed for more than five years. The various survivals at five years were: 1) overall survival, 55.6 percent (95 percent confidence interval, 49.1-62.1 percent), 2) cancer-specific survival, 67 percent (95 percent confidence interval, 60.9-73.1 percent), 3) cancer-free survival, 49.9 percent (95 percent confidence interval, 43.6-56.2 percent), 4) recurrence-free survival, 43.5 percent (95 percent confidence interval, 37.2-49.8 percent), and 5) relative survival, 73.4 percent (95 percent confidence interval, 65.4-81.4 percent).

CONCLUSIONS: The five-year survival calculations for this group of patients with colorectal cancer varied by as much as 30 percent depending on how the data was censored. This highlights that there needs to be a clear and accountable definition on how survival curves are calculated and presented in the literature to allow for meaningful interpretation and comparisons.

PMID:15657656

Resolving microcarcinoids in ulcerative colitis: report of a case.
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Ulcerative colitis is known to predispose to the development of neoplasia, especially adenocarcinoma. Microcarcinoids represent small nests of gut endocrine cells located in the mucosa and submucosa of the bowel. Such lesions have been identified in association with chronic inflammation and the concern is that they may represent a precursor lesion for invasive carcinoid tumors. Yet carcinoid tumors are rarely reported in patients with ulcerative colitis. This case report documents a 56-year-old male with ulcerative colitis who was found on random biopsies to have microcarcinoids in his rectal submucosa. Following treatment of his colitis, there was complete resolution of both the inflammation and the microcarcinoids. However, on subsequent follow-up at six months, the patient's colitis has returned and so have the microcarcinoids. We explore the issue of whether these lesions represent true neoplasias that should be resected, or whether they represent cellular hyperplasia in response to the inflammatory stimulus.

PMID:14991503

Can serum mast cell tryptase help diagnose anaphylaxis?
Brown SGA, Blackman KE, et al.
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Objective: We aimed to determine the utility of serum mast cell tryptase to diagnose anaphylaxis. Methods: As part of a venom immunotherapy trial, we performed 64 sting challenges. Blood samples were taken before the sting (baseline), and 15 min and 60 min after the sting. Tryptase was measured in baseline, 15 minute and 60 minute serum samples. Histamine was measured in baseline and 15 minute plasma samples. Eleven people had undisputed severe anaphylactic reactions; tryptase and histamine levels were assessed against this clinical gold standard diagnosis. Results: Excluding mild reactions from the analysis, peak tryptase readings had sensitivity of 0.36 and specificity of 0.93 using the recommended cut-off range (< 12.0 [mu]g/L). Receiver-operator curve analysis found a cut-off of 9.0 [mu]g/L would improve diagnostic performance (sensitivity 0.55, specificity 0.93). Serial tryptase measurement was significantly more discriminatory; an increase in tryptase of 2.0 [mu]g/L or greater had a sensitivity of 0.73 and specificity of 0.98. The addition of histamine measurements, defining a positive result by either a rise in tryptase or a rise in histamine, appeared to further increase sensitivity (0.90). Conclusions: Clinicians should use caution when using serum tryptase to refute or support a
Diagnosis of anaphylaxis. Serial tryptase measurement increases sensitivity and specificity. Further studies using serial tryptase determinations in general emergency department practice, perhaps supplemented by histamine determinations, are warranted.

PMID:2004203526


The first year of a formal emergency medicine training programme in Papua New Guinea.
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Objective: To describe a programme catalyzing the development of emergency medicine in Papua New Guinea (PNG). Methods: Five emergency physicians rotated through a new position of Senior Lecturer in Emergency Medicine in the University of PNG during 2003. The position was established as a consequence of emergency physician input supported by AusAID in 2002. Results: Fifth (final)-year medical students and medical officers in the Emergency Department at Port Moresby General Hospital undertook formal and bedside problem based learning. The first trainees for a Master of Medicine in Emergency Medicine programme were inducted and supported. Emergency department management was provided with specialist input. Research projects were initiated, dealing with snakebite, chloroquine toxicity and HIV/AIDS. The first year of an emergency nursing curriculum was supported. Conclusions: There is now considerable enthusiasm for the development of emergency medicine as the hospital generalists' specialty. Emergency nursing training has also made a start. Limitations on resources will require flexibility to sustain the project. Further support by emergency physicians will be needed.

PMID:2004357271


Compliance with advice and appropriateness of emergency presentation following contact with the HealthDirect telephone triage service.
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OBJECTIVE: Evaluation of compliance with advice and appropriateness of emergency presentation following contact with a telephone triage service (HealthDirect). METHODS: Compliance rates, triage distributions and admission rates were determined using linked HealthDirect and ED records for patients living within 2 km of an ED that presented during 2000. RESULTS: Of 13 019 presentations, 842 (6.5%) were HealthDirect contacts. In the HealthDirect group there were a greater proportion of patients under the age of 15 (290, 34% vs 1598, 13.1%) and women (481, 57% vs 5610, 46%). The triage distributions and admission rates for HealthDirect contacts and other patients were similar (HealthDirect 37.6% admitted, 95% CI 34-41, others 38.4% admitted, 95% CI 38-39, Pchi2 = 0.67). Of 3996 callers to HealthDirect, 3167 (79%) complied with advice with 963 (61%) complying with advice to present and 212 (9%, 95% CI 8-10%) presenting despite advice to defer presentation. Triage distributions and admission rates for compliers and non-compliers were similar (compliers 38% admitted, 95% CI 34-41, non-compliers, 37% admitted, 95% CI 30-44, Pchi2 = 0.89). CONCLUSIONS: HealthDirect contacts were of similar appropriateness to non-HealthDirect presenters and appear to attend the ED independent of HealthDirect advice. HealthDirect has a limited capacity to influence ED utilization or workload.

PMID:15239753

**Pilot study of metropolitan emergency department workload complexity.**

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**OBJECTIVE:** Assessment of emergency department (ED) patient complexity using the number of procedures, investigations or consultations (PICsum). METHODS: Retrospective analysis of 12 months of data from an adult metropolitan teaching hospital ED. RESULTS: A bimodal distribution of PICsum (modal peaks, PICsum 1 and 7) was observed in all Australasian Triage Scale, disposition, mode of arrival, age and referral source groups. Patients requiring a minimum of two procedures or a minimum of two consultations or a minimum of two investigations (Min2 patients) comprised 59% (95% CI 58.5-59.5) of total patients 93% (95% CI 92.5-93.8) of total PICsum. Age is highly correlated with Mean PICsum (Pearson r = 0.98, P < 0.001) and the proportion of Min2 patients (Pearson r = 0.98, P < 0.001). CONCLUSIONS: An intuitive partition in the complexity distribution is identified at up to one procedure, one investigation and one consultation. Patient age is correlated with complexity and ED age distribution may be a useful proxy for complexity, particularly if used in conjunction with validated age versus complexity tables.

PMID:15239757


**Insect sting anaphylaxis; prospective evaluation of treatment with intravenous adrenaline and volume resuscitation.[see comment].**

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**OBJECTIVES:** To assess a protocol for treatment of sting anaphylaxis. DESIGN: Prospective assessment of treatment with oxygen, intravenous infusion of adrenaline (epinephrine), and volume resuscitation with normal saline. SETTING: Sub-study of a venom immunotherapy trial. PARTICIPANTS: 21 otherwise healthy adults with systemic allergic reactions to diagnostic sting challenge. MAIN OUTCOME MEASURES: Response to treatment, total adrenaline dose and infusion duration, recurrence of symptoms after stopping the infusion, and additional volume resuscitation. RESULTS: 19 participants required intervention according to the protocol. All received adrenaline, and five received volume resuscitation. In nine cases, physical signs of anaphylaxis recurred after initial attempts at stopping adrenaline but resolved after recommencing the infusion. The median total dose and infusion duration were 590 micro g and 115 minutes respectively, but were significantly higher for eight patients who had hypotensive reactions (762 micro g and 169 minutes respectively). Hypotension was always accompanied by a relative bradycardia, which was severe and treated with atropine in two patients. Widespread T wave inversion occurred, before starting treatment with adrenaline, in one person with an otherwise mild reaction. All patients fully recovered and were fit for same day discharge, apart from the person with ECG changes who was observed overnight and discharged the following day. CONCLUSIONS: Carefully titrated intravenous adrenaline combined with volume resuscitation is an effective strategy for treating sting anaphylaxis, however severe bradycardia may benefit from additional treatment with atropine. Cardiac effects of anaphylaxis, perhaps including neurocardiogenic mechanisms, may be an important factor in some lethal reactions.

PMID:14988337


**Greater use of insulin by southern European compared with Anglo-Celt patients with type 2 diabetes: the Fremantle Diabetes Study.**

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OBJECTIVE: To investigate the relationship between blood glucose-lowering therapy, glycaemia and ethnicity in urban Australians with type 2 diabetes. DESIGN: Prospective observational community-based study of diabetes care, control and complications. METHODS: We analysed cross-sectional data from 1057 patients, 238 from a southern European (SE) migrant background and 819 Anglo-Celts (AC). Follow-up data were available for 539 patients (113 SE, 426 AC) who had annual reviews over 4 years. RESULTS: The SE patients were of similar age to the AC patients but had longer diabetes duration, were less fluent in English and had less formal education. After adjustment for diabetes duration, glycosylated haemoglobin and glutamic acid decarboxylase antibody positivity in a logistic regression model, insulin use at study entry was approximately twice as frequent amongst SE as AC patients (odds ratio (95% confidence interval); 1.90 (1.20-3.02)). In the prospective arm, progression to insulin increased in both groups, from 18.0% at baseline to 22.1% at 4 years in SE and from 7.1% to 14.4% in AC patients. beta-cell function (%B) and insulin sensitivity (%S) using the homoeostasis model assessment in a subset of diet-treated patients at baseline showed that SE ethnicity was associated with lower %B and greater %S than in the AC group. CONCLUSIONS: SE patients with early non-antibody-mediated beta-cell failure progress to insulin requirement within the first 4-5 years of type 2 diabetes. This could reflect either a longer period of undiagnosed diabetes or a more rapid loss of beta-cell function after diagnosis.

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A preliminary study from our laboratory found retinol (vitamin A alcohol) to have in vitro activity against Plasmodium falciparum at concentrations close to those in normal human serum (1-3 microM). To characterize the antimalarial potential of retinol in more detail, the 3D7 and K1 laboratory strains of P. falciparum were maintained in continuous culture and [3H]hypoxanthine incorporation and microscopy were used to assess the effect of retinol against asexual stages of the parasite life-cycle. Losses of retinol and retinol-associated hemolysis were also quantified in the in vitro culture system. There were retinol losses of >50% but no hemolysis was observed with added retinol concentrations up to 100 microM. All stages of parasite development showed comparable sensitivity to retinol including merozoite invasion (range of mean IC50 values 10.1-21.4 microM after adjustment for losses). Retinol pre-treatment of uninfected RBC did not inhibit merozoite invasion. Retinol treatment was associated with increased vacuolization within the parasite food vacuole and evidence of parasite membrane rupture. These appearances were similar to those seen with quinoline and artemisinin compounds. Although these data do not support a role for acute retinol supplementation in the treatment of falciparum malaria, they add to knowledge regarding potential antimalarial therapies and justify assessment of more potent synthetic retinoids and their metabolites.

Appreciative inquiry: a method for measuring the impact of a project on the well-being of an Indigenous community.
Murphy L, Kordyl P, et al.
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Issue addressed: This paper outlines the evaluation of the Indigenous Youth Arts and Culture Project using appreciative inquiry, an assets-based community development process that enhances positive potential in people and communities.

Methods: Twenty project participants, including six young
people, seven family members and seven service providers, participated in a one-day appreciative inquiry workshop consisting of four phases: discover, dream, design and deliver. Appreciative inquiry is an empowering process that enables participants to collectively identify the very best of "what is" and allow for imagination and creativity to flow to determine "what should be". Results and Conclusion: Using an appreciative inquiry approach to evaluate this project engaged participants and allowed them to identify project, personal and community strengths, assets and aspirations to design a way forward for the project and community. Appreciative inquiry added value to and consolidated the positive impact of the project on the well-being of the community. If sustained, the outcomes of the workshop could have a significant impact on the health and well-being of the individuals, families and community involved.

PMID:2009047267

Heart (British Cardiac Society). 2004; 90(9): 1036-41.

**Trends in coronary artery revascularisation procedures in Western Australia, 1980-2001.**
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**OBJECTIVES:** To describe trends in the use of coronary artery revascularisation procedures (CARPs) and to determine whether or when CARP rates will stabilise.

**SETTING:** State of Western Australia.

**PATIENTS:** All patients treated by coronary artery bypass grafting (CABG) or percutaneous coronary intervention (PCI) between 1980 and 2001.

**DESIGN:** Descriptive study.

**MAIN OUTCOME MEASURES:** Age standardised rates of first and total CARPs, CABGs, and PCIs.

**RESULTS:** Overall rates for both total and first CARPs among men and women rose steeply from 1980 to 1993, when they abruptly stabilised or actually started to decline. Rates in age groups under 65 years tended to rise earlier in the period and remained relatively flat, while rates for people over the age of 75 years started to rise later and were still increasing at the end of the study.

**CONCLUSIONS:** Despite continuing increases in capacity to perform both CABG and PCI in Western Australia and evidence of continuing increases in the use of CARPs in the elderly population, rates appear to have stabilised for the first time since they were introduced.

PMID:15310694

Heart (British Cardiac Society). 2004; 90(9): 1042-6.

**Trends in two year risk of repeat revascularisation or death from cardiovascular disease after coronary artery bypass grafting or percutaneous coronary intervention in Western Australia, 1980-2001.**
McCaul KA, Hobbs MST, et al.
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**AIMS:** To investigate whether, over the 21 year period 1980-2001, there had been a reduction in the risk of repeat revascularisation or death from cardiovascular disease in the cohort of all patients who were treated by coronary revascularisation in Western Australia.

**SETTING:** State of Western Australia.

**PATIENTS:** All patients treated by coronary artery bypass grafting (CABG) or percutaneous coronary intervention (PCI) between 1980 and 2001.

**DESIGN:** Cohort study.

**MAIN OUTCOME MEASURES:** Risk of repeat coronary artery revascularisation procedures (CARP) and risk of death from cardiovascular disease after first CARP.

**RESULTS:** After a CABG procedure, the two year risk of repeat revascularisation remained low (less than 2%) across the period 1980-2001. For PCI, however, this risk declined significantly from 33.6% in 1985-9 to 12.4% in 2000-1. The risk of death from cardiovascular disease after a CARP declined by about 50% between 1985 and 2001.

**CONCLUSIONS:** Outcomes such as the risk of repeat revascularisation and the risk of death from cardiovascular disease have improved significantly for patients who underwent CARPs across the period 1980-2001. This has occurred despite an increasing trend in first CARP rates among older
Homograft aortic valve replacement - The experience of one unit.
Ganguly G, Akhunji ZA, et al.
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Background. Homograft valves offer advantages including avoidance of anticoagulation and less susceptibility to infection especially in the setting of endocarditis. However, there is concern about their durability and possible accelerated degeneration particularly in cases of second time replacement with homografts. Aim. This study aimed to evaluate the pattern of homograft failure and the quality of life in patients after homograft implantation. Methods. Between 1990 and 1998, 58 patients underwent aortic valve replacement with a homograft (aortic homograft = 47, pulmonary homograft = 11). Evaluation was based on clinical and echocardiographic examination, patient questionnaires and explanted valve pathology. Survival and freedom from cardiac related death were expressed by actuarial methods. Results. Follow up ranged from 1 to 10 years (mean 5.5 years). Analysis of questionnaires revealed 60% of respondents to be in good performance status and 20% in moderate and 20% in poor performance status groups. Eleven patients (18.9%) required subsequent redo valve replacement after initial homograft insertion (pulmonary = 6, aortic = 5) due to either valve dehiscence (n = 4) or valve degeneration (n = 7). The mean interval of re-replacement was 5.4 years.
Conclusions. Pulmonary homografts have a high failure rate in the aortic position. Overall subjective and clinical improvement after surgery is less than expected for a 'physiological' device. In the setting of low availability of homografts the use of off-the-shelf devices such as stentless xenografts may be preferable in most cardiac surgical units in the current era. (C) 2004 Australasian Society of Cardiac and Thoracic Surgeons and the Cardiac Society of Australia and New Zealand. Published by Elsevier Inc. All rights reserved.

Staphylococcal enterotoxin-B-mediated stimulation of interleukin-13 production as a potential aetiologic factor in eczema in infants.
Lehmann HS, Heaton T, et al.
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BACKGROUND: Staphylococcus aureus colonization has been found in 80-100% of lesional skin from patients with atopic eczema dermatitis syndrome (AEDS) and is thought to have a role in the pathogenesis of the disease. Furthermore, up to 65% of S. aureus from lesional skin has been shown to produce toxigenic superantigens. METHODS: Using a cohort of 11 children under 2 years of age diagnosed with AEDS, we isolated peripheral blood mononuclear cells, cultured them with staphylococcal enterotoxin B (SEB) and phytohaemagglutinin, and assessed the cytokine response profiles. Plasma was also collected for immunoglobulin E analysis. In addition, skin and nasal swabs were taken and cultured to determine the presence of SEB-producing S. aureus by polymerase chain reaction (PCR) and reverse passive latex agglutination. RESULTS: We found a significant increase in the production of the SEB-induced cytokines interleukin (IL)-5 and IL-13 in the patient group when compared with non-atopic, healthy controls. For IL-13, there was almost no overlap in the levels between the groups. However, there was no correlation between SEB-induced IL-13 and disease severity. This difference was not seen when heat-inactivated S. aureus was used to stimulate the cells. CONCLUSIONS: IL-13 is an important factor in AEDS development in early childhood, and prophylactic anti-staphylococcal treatment may provide protection from AEDS in atopic individuals.

International Archives of Allergy & Immunology. 2004; 135(4): 306-12.

BACKGROUND AND AIMS: Recent evidence suggests that inflammatory cytokines may mediate reduced hepatic glucose production and reduced blood glucose concentrations in sepsis. Therefore the aim of this study is to provide direct evidence of a cytokine-mediated interaction between Kupffer cells and hepatocytes by characterising the effects of lipopolysaccharide-stimulated Kupffer cells on hepatocyte gluconeogenesis, and the activity of key regulatory enzymes of this pathway. METHODS AND RESULTS: Primary isolates of hepatocytes co-cultured with lipopolysaccharide-stimulated Kupffer cells in Transwell inserts showed a 48% inhibition of gluconeogenesis (P < 0.001). RNase protection assay and ELISA of Kupffer cells and the culture media following exposure to lipopolysaccharide showed increased levels of interleukin-1 alpha and beta, tumour necrosis factor alpha and IL-10. The addition of IL-1beta and IL-10 to hepatocyte cultures inhibited gluconeogenesis by 52% (P < 0.001), whereas each cytokine alone was ineffective. To determine whether altered production or activity of phosphoenolpyruvate carboxykinase or pyruvate kinase was responsible for the reduced glucose synthesis, their mRNA, protein levels and enzyme activities were measured. Primary hepatocytes co-cultured with lipopolysaccharide-stimulated Kupffer cells or cultured with a combination of IL-1beta and IL-10 displayed reduced levels of phosphoenolpyruvate carboxykinase mRNA, protein and enzyme activity. In contrast the mRNA, protein levels and enzyme activity of pyruvate kinase were not altered; suggesting that gluconeogenesis was suppressed by downregulation of phosphoenolpyruvate carboxykinase. CONCLUSIONS: Therefore, hypoglycaemia, which is often observed in sepsis, may be mediated by Kupffer cell-derived IL-1beta and IL-10. In addition this study suggests these cytokines inhibit phosphoenolpyruvate carboxykinase production and thereby hepatic gluconeogenesis.

PMID:15147725

Differential effects of gadolinium chloride on Kupffer cells in vivo and in vitro.
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Gadolinium chloride (GdCl) is commonly used to study the role of Kupffer cells in liver disease in vivo. The in vitro effects of GdCl on cultured Kupffer cells are poorly characterised. The aim of this study was to characterise rat Kupffer cell TNFalpha production, phagocytic function, and ED1 and ED2 antigen expression following the administration of GdCl. For in vivo experiments, rats received 10mg/kg GdCl IV or sterile saline. Lipopolysaccharide 3mg/kg IP (LPS) was administered 4h prior to sacrifice on Days 1-3, 5 or 8 following GdCl injection. Hepatic ED1 and ED2 positive macrophage numbers and TNFalpha mRNA levels were determined. For in vitro experiments, Kupffer cells were cultured in the presence of 0-270 microM GdCl for 24h following which viability, TNFalpha protein production in response to LPS (10 ng/ml), phagocytosis, and ED1 and ED2 staining were evaluated. In vivo, the proportion of ED1 positive cells which were ED2 positive was reduced from 87 to 3% and hepatic TNFalpha mRNA levels following LPS declined by 60% over Days 1-5 after injection of GdCl (P<0.01). In vitro, phagocytosis declined with increasing concentrations of GdCl. GdCl (0-27 microM) did not effect cultured Kupffer cell viability, TNFalpha production, ED1 or ED2 staining. We conclude that GdCl significantly reduces ED2 expression by Kupffer cells in vivo. In vitro, GdCl has a dose dependent effect on phagocytosis but only effects viability and TNFalpha production at high concentrations. ED2 expression of cultured Kupffer cells is not affected by GdCl.
PMID:14687926
Intrathecal fentanyl-induced pruritus during labour: the effect of prophylactic ondansetron.

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Fentanyl is commonly used for spinal analgesia during labour but it is associated with a high incidence of pruritus. This randomised, double-blind, placebo-controlled study was performed to evaluate the effect of prophylactic ondansetron on the incidence and severity of pruritus among parturients receiving intrathecal fentanyl as part of combined spinal-epidural analgesia. Seventy-three women were randomised to receive either saline placebo (group P, n = 25), ondansetron 4 mg (group O4, n = 23) or ondansetron 8 mg (group O8, n = 25) intravenously before intrathecal fentanyl 25 micrograms and bupivacaine 2 mg. The incidence and severity of pruritus were measured using a verbal rating and a visual analogue scale, and by the requirement for rescue anti-pruritic medication (naloxone). The overall incidence of pruritus was 95% (group P 100%, group O4 95%, group O8 90%). There were no significant differences between groups for severity of pruritus or requirement for treatment (naloxone given to 45%, 28% and 35% of groups P, O4 and O8 respectively). Secondary outcomes such as the incidence of headache, pain and nausea were not significantly different between groups. We conclude that prophylactic ondansetron 4 or 8 mg intravenously was ineffective in reducing the incidence or severity of intrathecal fentanyl-induced pruritus during labour.

PMID:15321438

Clinical features and severity grading of anaphylaxis.

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BACKGROUND: Existing grading systems for acute systemic hypersensitivity reactions vary considerably, have a number of deficiencies, and lack a consistent definition of anaphylaxis. OBJECTIVE: The aims of this study were to develop a simple grading system and definition of anaphylaxis and to identify predictors of reaction severity. METHODS: Case records from 1149 systemic hypersensitivity reactions presenting to an emergency department were analyzed retrospectively. Logistic regression analyses of the associations between individual reaction features and hypotension and hypoxia were used to construct a grading system. Epinephrine use, etiology, age, sex, comorbidities, and concurrent medications were then assessed for their association with reaction grade. RESULTS: Confusion, collapse, unconsciousness, and incontinence were strongly associated with hypotension and hypoxia and were used to define severe reactions. Diaphoresis, vomiting, presyncope, dyspnea, stridor, wheeze, chest/throat tightness, nausea, vomiting, and abdominal pain had weaker, albeit significant, associations and were used to define moderate reactions. Reactions limited to the skin (urticaria, erythema, and angioedema) were defined as mild. These grades correlated well with epinephrine usage. Older age, insect venom, and iatrogenic causes were independent predictors of severity. Preexisting lung disease was associated with an increased risk of hypoxia. CONCLUSION: This simple grading system has potential value for defining reaction severity in clinical practice and research settings. The moderate and severe grades provide a workable definition of anaphylaxis. Age, reaction precipitant, and preexisting lung disease appear to be the major determinants of reaction severity.

PMID:15316518

Oestrogen replacement therapy may improve memory functioning in the absence of APOE epsilon4.[see comment].

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There is currently intense controversy regarding the use of hormone replacement therapy (HRT) in postmenopausal women, in relation to its therapeutic efficacy in Alzheimer’s disease (AD). It has been suggested that the benefits of HRT may be modified by apolipoprotein E (APOE) genotype (the major genetic risk factor for AD). Here we report the findings of the first study designed to systematically explore the interaction of (a) oestrogen replacement therapy (ERT) and (b) possession of an epsilon4 allele of APOE on specific elements of episodic learning and memory that are commonly used indices of age-related cognitive decline. This data represents a cross-sectional analysis of the interaction of ERT and APOE genotype on learning and memory in a cohort of 181 healthy postmenopausal women [ERT users (n = 101, mean age 65.40 +/- 6.34); ERT non-users (n = 80, mean age 67.03 +/- 6.80)] residing in Perth, Western Australia. The highest level of learning (trials 2-5; P < 0.05) and memory (e.g. total number of items recalled; P < 0.05) performance was observed in women taking ERT who were not carriers of the APOE epsilon4 allele. APOEepsilon4 carriers receiving ERT performed no better on episodic memory testing than APOE epsilon4 carriers who were not receiving ERT. These cognitive differences related to genetic profile, were noted on both recall and recognition (P = 0.005) tests of memory. The findings have significance for evaluating whether and when ERT may be clinically indicated. Specifically, ERT may benefit the cognitive functioning of women not carrying the APOE epsilon4 allele.

PMID:15201477


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We describe a case in which the patient had routine, uneventful cataract surgery and developed snuff syndrome on day 1 postoperatively. The patient had pseudoexfoliation syndrome and normal intraocular pressure that was well controlled by timolol and previous laser trabeculoplasty. Although the visual result had been good after surgery in the first (right) eye with a best corrected visual acuity (BCVA) of 6/5, this adverse event, which decreased the BCVA in the left eye from 6/24 preoperatively to hand movements postoperatively, was unexpected. Systemic evaluation failed to identify a specific cause. Data were collected prospectively on 1000 subsequent, consecutive cases of cataract surgery, but we were unable to find pathogenetic data on this occurrence.

PMID:15519103


Infliximab in the management of the extra-intestinal manifestations of Crohn's disease. Lawrance IC.
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PMID:2004483887


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Background and Aims: To determine the cost-effectiveness of screening for colorectal cancer using
flexible sigmoidoscopy once every 10 years, compared with annual and biennial rehydrated Hemoccult fecal occult blood testing and colonoscopy once every 10 years, or no screening. Methods: A Markov model was developed in order to simulate the progression of a cohort of asymptomatic, average-risk individuals aged 55-64 years who were moving through a defined series of states towards death. The main outcome measures were: cases of colorectal cancer averted, colorectal cancer deaths averted, and cost per life-year saved. Results: Colonoscopy averted the greatest number of cases of colorectal cancer (35%), followed by flexible sigmoidoscopy (25%), and annual (24%) and biennial (14%) fecal occult blood testing. Colonoscopy averted the greatest number of deaths from colorectal cancer (31%), followed by annual fecal occult blood testing (29%), flexible sigmoidoscopy (21%) and biennial fecal occult blood testing (19%). Flexible sigmoidoscopy was the most efficient in terms of cost per life-year saved (A$16 801), followed by colonoscopy (A$19 285), biennial (A$41183), and annual (A$46 900) fecal occult blood testing. Conclusions: Flexible sigmoidoscopy and colonoscopy are cost-effective strategies for reducing the disease burden of colorectal cancer. (C) 2004 Blackwell Publishing Asia Pty Ltd.

**Efficacy of transanal endoscopic microsurgery in the management of rectal polyps.**
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BACKGROUND AND AIM: Transanal endoscopic microsurgery (TEM) was a technique developed to allow the excision of adenomas and early-stage cancers from the rectum and distal sigmoid colon. The aim of this project was to prospectively study surgical morbidity, mortality and the local recurrence rate of all patients treated with this technique. METHODS: All patients undergoing TEM were prospectively evaluated. Endpoints to assess the surgical morbidity and mortality were defined before the study commenced. All patients underwent regular follow up to determine treatment efficacy in terms of the local recurrence rate and survival. RESULTS: The study involved 113 patients, with a mean age of 69 years (standard deviation 14 years, range 30-94 years), and a male to female ratio of 1.4:1. The mean polyp area was 20.5 cm(2) (range 1-169 cm(2)) and the mean height above the anal verge was 9.5 cm (range 4-25 cm). Histology of the tumors found 62 adenomas, 20 carcinomas in situ, and 31 adenocarcinomas. There were no unplanned returns to theater or postoperative deaths. Four patients required readmission within 30 days because of bleeding, and nine patients underwent more radical surgical procedures following histological evaluation of the resected specimens. During a mean follow up of 1.5 +/- 0.8 years (maximum 3.2 years), there have been two recurrences of villous adenomas. The actuarial local recurrence rate at 2 years is 2.4% (95% confidence interval 0.8-4.0%). CONCLUSION: TEM was demonstrated to be a safe surgical procedure, and early follow up has shown it to be an efficacious treatment for benign rectal adenomas and early rectal cancers. Copyright 2004 Blackwell Publishing Asia Pty Ltd
PMID:2004048192

**Evaluation of stentless kangaroo aortic valves in the mitral position of juvenile sheep.**
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BACKGROUND AND AIM OF THE STUDY: The performance and longevity of bioprosthetic heart valves are limited by tissue calcification and degeneration after implantation. Experimental valve replacement in large animal models forms an important component of the preclinical evaluation of these bioprosthetic heart valves. The study aim was to assess the feasibility of a mitral model for stentless valves and to evaluate the calcification behavior of stentless glutaraldehyde-preserved
kangaroo heart valves in the mitral position of a sheep model. METHODS: Medtronic Freestyle (n = 10) and kangaroo (n = 11) stentless aortic valves were implanted in the mitral position of juvenile sheep and retrieved after a maximum of 200 days. Retrieved stentless valves were examined for morphological changes and calcification of the valve tissue, using radiological screening, Von Kossa's staining and atomic absorption spectrophotometry. RESULTS: Four sheep (40.0%) with Medtronic Freestyle and 10 sheep (90.9%) with kangaroo valves could be weaned from bypass and mechanical ventilation. Two animals (20.0%) with Medtronic Freestyle and six animals (54.5%) with kangaroo prostheses survived more than 30 days postoperatively. No significant difference (p >0.05) was seen between the calcification potential of Medtronic Freestyle valve leaflets (3.21 +/- 1.67 microg/mg) after 93 days and kangaroo valve leaflets (2.39 +/- 0.80 microg/mg) after 200 days. CONCLUSION: The present results suggest that implantation of a stentless valve in the mitral position of sheep is possible, but technically difficult. The calcification potential of kangaroo valve tissue is comparable to that of Freestyle valve tissue in the mitral position of sheep.

PMID:15311878


ADAPT-treated porcine valve tissue (cusp and wall) versus Medtronic Freestyle and Prima Plus: crosslink stability and calcification behavior in the subcutaneous rat model.

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BACKGROUND AND AIM OF THE STUDY: The study aim was to compare the crosslink stability and calcification behavior of porcine tissue (cusp and wall), treated with a new antimineralization process (ADAPT) with that of commercially prepared Freestyle and Prima Plus bioprosthetic tissues.

METHODS: Porcine aortic roots were divided into two groups: (i) tissue zero pressure-fixed with 0.625% glutaraldehyde (GA) for seven days and stored in 0.25% GA (as control); and (ii) tissue exposed to the ADAPT process for four days and stored in 0.25% buffered GA. These groups were compared with Freestyle and Prima Plus tissues (cusp and wall). Crosslink stability was assessed by shrinkage temperature and resistance to pronase degradation. Calcification behavior was assessed histologically (Von Kossa staining) and by atomic absorption spectrophotometry of explanted tissue after eight weeks. in a subcutaneous rat model. RESULTS: Crosslink stability and calcification potential of ADAPT-treated porcine valve cusps were comparable to those of Freestyle and Prima Plus cusps (p = NS). ADAPT-treated porcine wall tissue showed improved crosslink stability (p <0.05) and significantly (p <0.001) reduced calcification (-95.95%) compared to control (-0.00%), Freestyle (-47.87%) and Prima Plus (-51.95%) tissues. CONCLUSION: The ADAPT process is effective in reducing calcification in both porcine cusp and wall tissues in a subcutaneous rat model, and further suggest that enhanced crosslinking plays an important role in minimizing aortic wall calcification.

PMID:15311879


Reasons for not intensifying antihypertensive treatment (RIAT): A primary care antihypertensive intervention study.

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Objective: Hypertension is often poorly controlled, despite its importance and despite the availability of very effective treatments. An under-recognized problem is the failure of consensus guidelines to acknowledge the important difference between efficacy in clinical trials and effectiveness in clinical practice. The present survey was designed to prospectively assess what is the target blood pressure (BP) goal defined by a general practitioner (GP) for an individual patient, and what are the reasons for not modifying an antihypertensive drug regimen, when predefined individual BP goals are not
achieved. Design: Family practice based, open intervention survey. Subjects: Participating GPs enrolled 2621 hypertensive patients. At the first visit each physician was required to assess the cardiovascular risk profile of each patient and to define individual BP targets. Interventions: Treatment was started with irbesartan alone or in fixed combination with hydrochlorothiazide. Follow-up visits were suggested after 1 month, 2 months and 4 months. Physicians were asked to report BP values under the new treatment regimen and to indicate whether in their opinion pre-defined BP targets set at baseline were achieved or not and whether the antihypertensive regimen was modified or maintained in relation to whether target BP was reached or not. Main outcome measure: To provide reasons for not changing the treatment even though BP goals were missed. Results: Average target BP values defined by the physicians at baseline were 138 +/- 8 mmHg for systolic and 84 +/- 5 mmHg for diastolic BP. Among GPs, defined target BP values did not depend on individual risk stratification, but rather depended on baseline BP values. At baseline systolic and diastolic BP averaged 165/ 97 +/- 17/10 mmHg, while at the last visit achieved BP averaged 140/84 +/- 14/8 mmHg. There were three main reasons for not intensifying antihypertensive treatment when BP targets were not achieved. These reasons were: (1) the assumption that the time after starting the new drug was too short to appreciate its full effect (44% at first, 14% at last follow-up), (2) that there was a clear improvement or the target BP was almost reached (24% at first, 34% at last follow-up) or (3) that self-measurements were considered satisfactorily (10% at the last visit). Conclusions: Failure of physicians to follow guidelines is apparently dependent on the belief that baseline BP dictates the target, that a clear improvement in BP might be sufficient and that the full drug effect may take up to 4 months or more to be attained. (C) 2004 Lippincott Williams & Wilkins.

PMID:2004242487

Active renin versus plasma renin activity to define aldosterone-to-renin ratio for primary aldosteronism.[see comment].
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BACKGROUND: In recent years, the assessment of the plasma aldosterone-to-renin ratio (ARR) has become an established screening method for the diagnosis of primary aldosteronism. Plasma renin activity (PRA) is usually measured to define ARR although, increasingly, renin concentration alone is often measured in clinical routine. OBJECTIVE: To determine the threshold of ARR using active renin concentration to screen for primary aldosteronism. DESIGN AND PARTICIPANTS: To determine the ARR threshold based on plasma immunoreactive renin concentration (irR), we measured plasma aldosterone concentration (PAC), irR and PRA in 36 hypertensive patients, nine thereof with adrenal adenoma, and compared ARRs calculated from irR and PRA, respectively. SETTING: Single-centre, hypertension clinic in a tertiary care hospital. RESULTS: PRA ranged from 0.41-14.9 ng/ml per h and irR from 1.1-72 ng/l. There was an excellent correlation between PRA and irR (r = 0.98, P < 0.0001) and between ARRPRA and ARRirR (r = 0.96, P < 0.0001). An ARRPRA > 750 pmol/l per ng/ml per h was previously found to be highly predictive of primary aldosteronism because 90% of the corresponding patients failed to suppress PAC upon saline infusion or fludrocortisone. The corresponding threshold value for ARRirR was 150 pmol/ng in our patients. Only these patients had adrenal adenomas. CONCLUSIONS: The ARR threshold to screen for primary aldosteronism may be based on measurement of irR. An ARRirR > 150 pmol/ng may indicate primary aldosteronism.
PMID:15076197
Oblique screws at the plate ends increase the fixation strength in synthetic bone test medium. Stoffel K, Stachowiak G, et al. Department of Orthopaedic Surgery, Fremantle Hospital, Fremantle, Western Australia, Australia. stoffel@cyllene.uwa.edu.au

OBJECTIVE: To test the hypothesis that oblique screws at the ends of a plate provide increased strength of fixation as compared to standard screw insertion. DESIGN: Biomechanical laboratory study in synthetic bone test medium. METHODS: Narrow 4.5-mm stainless steel low-contoured dynamic compression plates were anchored with cortical screws to blocks of polyurethane foam. The fixation strength in cantilever bending (gap closing mode) and torsion was quantified using a material testing system. Different constructs were tested to investigate the effect of the screw orientation at the end of the plate (straight versus oblique at 30 degrees), the plate, and bridging length as well as the number of screws. RESULTS: An oblique screw at the plate end produced an increased strength of fixation in all tests; however, the difference was more significant in shorter plates and in constructs with no screw omission adjacent to the fracture site. Both longer plates and increased bridging length produced a significantly stronger construct able to withstand higher compression loads. Under torsional loading, the fixation strength was mainly dependent on the number of screws. CONCLUSIONS: The current data suggest that when using a conventional plating technique, plate length is the most important factor in withstanding forces in cantilever bending. With regard to resisting torsional load, the number of screws is the most important factor. Furthermore, oblique screws at the ends of a plate increase fixation strength. Copyright 2004 Lippincott Williams & Wilkins PMID:15448450

Testing low/very low frequency acoustic sources for basin-wide propagation in the Indian Ocean. Blackman DK, de Groot-Hedlin C, et al. Scripps Institution of Oceanography, La Jolla, California 92093, USA. dblackman@ucsd.edu

Low/very low frequency acoustic signals were transmitted to distant receivers in the Indian Ocean. The aim was to test methods for characterizing the hydroacoustic capability of the International Monitoring System (IMS) that discriminates for nuclear tests in the region. Several acoustic sources were deployed between Seychelles and Fremantle, Australia, and the IMS receivers comprised a network of hydrophones off Diego Garcia and Australia. Two of the three acoustic sources tested produced basin-scale propagation of impulsive signals. Single glass spheres imploded within the sound channel produced a clear signal at frequencies above approximately 40 Hz, at ranges of hundreds to a thousand kilometers. Five-sphere glass implosions were recorded at ranges up to 4400 km. Near-sea surface shots from a large airgun array were recorded in several cases at ranges of hundreds to thousands of kilometers, the frequency of the highest signal-to-noise ratio arrivals varied within the 5-100 Hz band. High background noise level was a key factor at IMS stations that did not detect the airgun signals in the 5-15 Hz band. In a few cases, details of bathymetric features that are not well represented in the digital elevation model contributed to unexpected variation in relative signal levels between IMS stations. PMID:15532639

CD14-positive hepatic monocytes/macrophages increase in hereditary hemochromatosis. Leicester KL, Olynyk JK, et al. School of Medicine and Pharmacology, University of Western Australia, Australia.

BACKGROUND/AIMS: Iron overload in hereditary hemochromatosis (HH) may result in hepatic fibrosis and cirrhosis, primarily due to collagen production by hepatic stellate cells that become activated to myofibroblasts. Endotoxin-responsive monocytes/macrophages (CD14-positive) are
potential sources of profibrogenic factors. The aims of this study were to determine (1) whether CD14-positive monocytes/macrophages are present in the livers of patients with HH and (2) the potential relationship between CD14-positive cells and hepatic fibrosis in HH. METHODS: HH was diagnosed using standard clinical, biochemical and genotypic parameters. Liver specimens from HH patients and control subjects were immunostained for CD14, CD68 and alpha-smooth muscle actin (alpha-SMA) and the number of cells expressing these antigens was determined. Fibrosis was assessed by routine histological methods. RESULTS: The total number of hepatic CD68-positive monocytes/macrophages was similar in HH patients and control subjects; however, there was a nine-fold increase in the number of CD14-positive monocytes/macrophages in HH patients. Control subjects had very low levels of hepatic CD14 expression. In HH livers with advanced fibrosis, CD14-positive monocytes/macrophages were often associated with fibrous septa containing myofibroblasts expressing alpha-SMA. CONCLUSIONS: There was a substantial increase in hepatic CD14-positive monocytes/macrophages in HH and, in livers with advanced fibrosis, these cells were often associated with fibrous septa and septal myofibroblasts. The total number of monocytes/macrophages was similar in HH and control livers. In control human liver, Kupffer cells had a very low expression of CD14. These findings suggest that CD14-positive monocytes/macrophages may contribute to the process of hepatic fibrogenesis in HH.

PMID:15482341


Evolution of untreated hereditary hemochromatosis in the Busselton population: a 17-year study.[see comment].
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OBJECTIVE: To describe the evolution of biochemical and clinical features during a 17-year period in untreated subjects homozygous for the C282Y mutation in the hemochromatosis gene. SUBJECTS AND METHODS: In 1998, 12 subjects from Busselton, Australia, were newly diagnosed as being homozygous for the C282Y mutation. We determined transferrin saturation and ferritin values and retrieved clinical information from the 1981, 1994, and 1998 population surveys for 10 of these subjects. RESULTS: The median age of the 10 subjects in 1981 was 30 years. Between 1981 and 1998, the median transferrin saturation value increased from 42% to 76%. Six subjects with elevated transferrin saturation in 1998 had values less than 45% in 1981. Between 1981 and 1998, the median serum ferritin levels increased from 271 microg/L to 593 microg/L. Serum ferritin levels increased in 4 subjects, remained relatively constant in 4, and decreased in 2. Of 5 subjects with serum ferritin levels lower than 200 microg/L in 1981, 4 had no increase in these levels between 1981 and 1998. Of 4 subjects with persistently elevated serum ferritin levels greater than 500 microg/L, 3 developed stage III or IV fibrosis, based on the METAVIR scoring system. CONCLUSIONS: Untreated C282Y homozygous subjects had progressively increasing transferrin saturation values but marked variation in serum ferritin levels during a 17-year period before diagnosis. A screening threshold for serum transferrin saturation values greater than 45% at an early stage in adult life could fail to detect 60% of C282Y homozygotes who subsequently develop biochemical features of hemochromatosis.

PMID:15008603


Parallel infusion of hydrocortisone +/- chlorpheniramine bolus injection to prevent acute adverse reactions to antivenom for snakebites (multiple letters) [1].
Brown SGA, Kularatne SAM, et al.
S.G.A. Brown, University of Western Australia, Department of Emergency Medicine, Fremantle Hospital, Alma Street, Fremantle, WA 6160; Australia. E-Mail: simon.brown@health.wa.gov.au.

PMID:2004185338
Partial oesophageal perforation associated with cold carbonated beverage ingestion.

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We present a rare case of spontaneous intramural oesophageal perforation after the rapid ingestion of a cold carbonated beverage. A previously well patient presented with sudden onset of severe retrosternal pain associated with pain on swallowing. A contrast computed tomography scan and gastroscopy confirmed the diagnosis. With the widespread popular practice of drinking cold carbonated beverages, especially during the summer season, clinicians should be aware of this possible serious complication.

PMID:15540968

Preventing pressure ulcers.

Stacey MC.

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PMID:2004165328

Screening sigmoidoscopy for colorectal cancer: Further pieces in the jigsaw.

Viiala CH, Olynyk JK.

J.K. Olynyk, Department of Gastroenterology, School of Medicine and Pharmacology, University of Western Australia, Fremantle Hospital Campus, Fremantle, WA; Australia. E-Mail: jolynyk@cyllene.uwa.edu.au.

PMID:2004232592

Peripheral arterial disease: prognostic significance and prevention of atherothrombotic complications.


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The prevalence of peripheral arterial disease (PAD) in people aged over 55 years is 10%-25% and increases with age; 70%-80% of affected individuals are asymptomatic; only a minority ever require revascularisation or amputation. Patients with PAD alone have the same relative risk of death from cardiovascular causes as those with coronary or cerebrovascular disease, and are four times more likely to die within 10 years than patients without the disease. The ankle-brachial pressure index (ABPI) is a simple, non-invasive bedside tool for diagnosing PAD - an ABPI less than 0.9 is considered diagnostic of PAD. About half of patients with PAD (defined by an abnormal ABPI) have symptomatic coronary or cerebral vascular disease. The ABPI is an independent predictor of coronary and cerebrovascular morbidity and mortality. Patients with PAD require medical management to prevent future coronary and cerebral vascular events. There are currently insufficient data to recommend routine population screening for asymptomatic PAD using the ABPI. [References: 43]

PMID:15287833

Understanding the stresses and strains of being a doctor.

Riley GJ.
Stress in doctors is a product of the interaction between the demanding nature of their work and their often obsessive, conscientious and committed personalities. In the face of extremely demanding work, a subjective lack of control and insufficient rewards are powerful sources of stress in doctors. If demands continue to rise and adjustments are not made, then inevitably a "correction" will occur, which may take the form of "burnout" or physical and/or mental impairment. Doctors need to reclaim control of their work environment and employers need to recognise the need for doctors to participate in decisions affecting their working lives. All doctors should be aware of predictors of risk and signals of impairment, as well as available avenues of assistance. Relevant medical organisations (eg, the Colleges, hospital administrations, and medical defence organisations) need to develop and rehearse effective response pathways for assisting impaired doctors. [References: 24]

**Mutation analysis of CYP11B1 and CYP11B2 in patients with increased 18-hydroxycortisol production.**
Nicod J, Dick B, et al.
P. Ferrari, Department of Nephrology, Fremantle Hospital, University of Western Australia, Alma Street, Fremantle, WA 6959; Switzerland. E-Mail: paolo.ferrari@health.wa.gov.au.
Background: In patients with glucocorticoid remediable aldosteronism (GRA), a rare hypertensive disorder caused by the presence of a chimeric aldosterone synthase (CYP11B2) and 11[beta]-hydroxylase (CYP11B1) gene, high level of urinary 18-hydroxycortisol (18OHF) excretion are observed. In some patients with hypertension, increased urinary 18OHF secretion is also found in the absence of the hybrid CYP11B1/CYP11B2 gene. We hypothesised that gene variants of CYP11B1 or CYP11B2 may be linked to this abnormal glucocorticoid production. Methods: The urinary steroid profile was analysed by gas chromatography/mass spectrometry in 429 hypertensive patients and 98 (23%) thereof tested positive for increased 18OHF excretion. After correction for total cortisol excretion, 12 subjects showed an abnormally high 18OHF excretion. For genotyping DNA was obtained from six of these patients. All were tested negative for the hybrid CYP11B1/CYP11B2 gene and were further analysed for mutations in all exons and promoter regions of both CYP11B1 and CYP11B2 by single strand conformation polymorphism (SSCP) and sequencing when appropriate. Results: The genetic analysis of the two genes revealed the presence of nine molecular variants in CYP11B2 and three in CYP11B1. In addition to published polymorphic sites, we identified two new variants in CYP11B2 but no new variants in CYP11B1. The newly identified CYP11B2 mutations are a C/T single nucleotide exchange located in the first intron and a double nucleotide exchange at the 3'-splice site of exon 8. The mutated sequence corresponds to the sequence of CYP11B1 indicating a gene conversion. This suggests that the mutant is not likely to affect splicing. Thus, none of the genetic variants identified explains the high urinary excretion of 18OHF. Conclusions: We present here a complete method for the genetic analysis of the CYP11B1 and CYP11B2 genes. By this method we could not identify genetic variants responsible for a GRA-like phenotype. The presence of high levels of 18OHF should not be used alone as a diagnosis tool for GRA. (C) 2003 Elsevier Ireland Ltd. All rights reserved.
PMID:2004078302

**Optimization of technetium-99m Sestamibi single-photon emission tomography to define multidrug resistance with confidence.**
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Department of Nuclear Medicine, Fremantle Hospital, Western Australia. rachmoor@dph.uwa.edu.au
BACKGROUND: The efflux rate of technetium-99m Sestamibi (99mTc-Sestamibi) is a kinetic
phenomenon related to the response of cancer cells to chemotherapy, and may be used to determine
drug resistance. Measurement of the efflux rate requires accurate quantitative single-photon emission
tomography (SPET) imaging within the time constraints imposed by the kinetics of the process.
METHODS: A phantom study, at activity concentrations typically found with 99mTc-Sestamibi in vivo,
was undertaken to optimize the SPET parameters and, in particular, to determine whether 180
degrees acquisition arcs with heads in 'L' configuration could be used for accurate quantification.
Following the development of the most appropriate SPET protocol, a small patient pilot study was
undertaken. RESULTS: Studies designed to evaluate statistical uncertainty (noise), contrast restitution
and spatial resolution of the data sets, using different acquisition and reconstruction parameters,
showed that 180 degrees SPET using a 64 x 64 matrix, 6 degrees angular sampling and iterative
reconstruction was optimal. Finer linear and/or angular sampling afforded negligible improvement in
resolution, but markedly increased the statistical uncertainty. Comparison of 360 degrees and 180
degrees acquisitions, utilizing conventional filtered backprojection and iterative reconstruction
algorithms, demonstrated that the statistical uncertainty was reduced to a greater extent for 180
degrees data collection. For 360 degrees (64 x 64) data acquisition, statistical uncertainty decreased
from 15% to 11% using the iterative algorithm, whilst the 180 degrees (64 x 64) data showed a
reduction from 20% to 7%, and approached values obtained by planar imaging. The efflux
measurements obtained in the patient pilot study were consistent with the observed chemotherapy
response. CONCLUSION: Our study shows that 180 degrees acquisition arcs are a practical option for
accurate quantitative SPET kinetic imaging for potential studies of chemotherapy response in patients
with lung cancer.
PMD:15381872

Nursing students' self-efficacy in providing transcultural care.
Lim J, Downie J, et al.
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Australia.
The aim of any health care service is to provide optimal quality care to clients and families regardless
of their ethnic group. As today's Australian society comprises a multicultural population that
encompasses clients with different cultural norms and values, this study examined undergraduate
nursing students' self-efficacy in providing transcultural nursing care. A sample of 196 nursing
students enrolled in the first and fourth year of a pre-registration nursing program in a Western
Australian University were invited to participate in a survey incorporating a transcultural self-efficacy
tool (TSET) designed by Jeffery [Unpublished instrument copyrighted by author, 1994]. The findings
revealed that fourth year students, exposed to increased theoretical information and clinical
experience, had a more positive perception of their self-efficacy in providing transcultural nursing skills
than the first year students. In addition, the study found that age, gender, country of birth, languages
spoken at home and previous work experience did not influence the nursing students' perception of
self-efficacy in performing transcultural care. The study supports the notion that educational
preparation and relevant clinical experience is important in providing nursing students with the
opportunity to develop self-efficacy in performing effective and efficient transcultural nursing in today's
multicultural health care system. It is for this reason that educators need to focus on providing
students with relevant theoretical information and ensure sufficient clinical exposure to support student
learning in the undergraduate program.
PMD:15312951

Together we are heard: effectiveness of daily 'language' groups in a community preschool.
Hodge T, Downie J.
Pineview Community Kindergarten and Fremantle Community Health Service, Curtin University of
Strong oral language skills are a prerequisite for successful literacy and there is a strong interdependence between oral language acquisition and emergent literacy development. Ramifications of this are that children with language impairments are at great risk for difficulties in learning to read and write, with problems often persisting throughout the school years into adulthood. The Together we are heard program involved improving each child’s oral language skills through group sessions facilitated by a speech pathologist on a daily basis at preschool. The aim of the present research was to determine the effectiveness of the program to identify the best way to assist children to develop appropriate language skills. The study showed that the children improved significantly in all four levels of the Preschool Language Assessment Inventory (PLAI). Importantly, the program was effective for both genders and there was no difference in the success of Indigenous children when compared to their European counterparts. There is a strong recommendation for further research and to expand such programs, particularly in areas that target children from impoverished and deprived environmental backgrounds.


**Novel polymer-supported coupling/dehydrating reagents for use in organic synthesis.**

Fairfull-Smith nee Elson KE, Jenkins ID, et al.

School of Science, Griffith University, Nathan, Brisbane, Australia.

Two novel dehydrating reagents and, based on a phosphonium anhydride and an oxyphosphonium triflate respectively, were prepared by reaction of the corresponding polymer-supported phosphine oxides with triflic anhydride. Reagent, based on the novel phosphorus heterocycle 1,1,3,3-tetraphenyl-2-oxa-1,3-diphospholanium bis(trifluoromethanesulfonate), was found to be a useful reagent for ester and amide formation. A wide range of coupling/dehydration-type reactions, such as ester, amide, anhydride, peptide, ether and nitrile formation, were performed in high yield using the more readily prepared polymer-supported triphenylphosphine ditriflate, which was easily recovered and re-used several times without loss of efficiency. With primary alcohols, both reagents and provide an alternative to the Mitsunobu reaction, where the use of azodicarboxylates and chromatography to remove the phosphine oxide by-product can be avoided. The use of 4-dimethylaminopyridine allowed the esterification of secondary alcohols with to proceed in high yield but with retention of configuration.

**Primary Intention. 2004; 12(4): 163-4.**

**The application of TIME (wound bed preparation principles) in the management of a chronic heel ulcer.**

Foley L.

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A review of the treatment of a difficult to heal chronic heel ulcer using TIME (wound bed preparation principles).

**Psychological Medicine. 2004; 34(6): 983-90.**

**A group intervention which assists patients with dual diagnosis reduce their drug use: a randomized controlled trial.[see comment].**

James W, Preston NJ, et al.

Alma Street Centre, Fremantle Hospital and Health Service, Fremantle, WA 6160, Australia.

BACKGROUND: There is a well-recognized association between substance use and psychotic disorders, sometimes described as ‘dual diagnosis’. The use of substances by people with psychosis has a negative impact in terms of symptoms, longitudinal course of illness and psychosocial
adjustment. There are few validated treatments for such individuals, and those that do exist are usually impracticable in routine clinical settings. The present study employs a randomized controlled experimental design to examine the effectiveness of a manualized group-based intervention in helping patients with dual diagnosis reduce their substance use. METHOD: The active intervention consisted of weekly 90-min sessions over 6 weeks. The manualized intervention was tailored to participants’ stage of change and motivations for drug use. The control condition was a single educational session. RESULTS: Sixty-three subjects participated, of whom 58 (92%) completed a 3-month follow-up assessment of psychopathology, medication and substance use. Significant reductions in favour of the treatment condition were observed for psychopathology, chlorpromazine equivalent dose of antipsychotics, alcohol and illicit substance use, severity of dependence and hospitalization. CONCLUSIONS: It is possible to reduce substance use in individuals with psychotic disorders, using a targeted group-based approach. This has important implications for clinicians who wish to improve the long-term outcome of their patients.

PMID:15554569

**Short- and long-term hospital and community exercise programmes for patients with chronic obstructive pulmonary disease.**


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OBJECTIVE: Pulmonary rehabilitation in patients with COPD has been shown to be beneficial but the optimal setting is not known. In the present study, the efficacy of a short-term community-based exercise programme was compared with a standard hospital outpatient programme. Additionally, the usefulness of community or home programmes in maintaining improvements in the longer term was studied. METHODOLOGY: Forty-three patients with moderate to severe COPD were randomized to one of the following three groups: a 3-month hospital programme then a 9 month home programme (Hospital/Home); a 3-month hospital programme then a 9-month community programme (Hospital/Community); or a 12-month community programme (Community/Community). The initial 3-month programme was analysed by comparing the Hospital group (Hospital/Home plus Hospital/Community) with the Community group (Community/Community). Six-minute walking distance (6MWD), quality of life (Guyatt chronic respiratory disease questionnaire, CRQ) and lung function were measured at 0, 3, 6 and 12 months and results were analysed using the Wilcoxon rank sum test. RESULTS: At 3 months, there was a significant improvement from baseline in 6MWD in the Hospital group (81.3 +/- 18.3 m, P < 0.05, anova) but not the Community group (14.4 +/- 28.5 m, not significant). The difference between the groups was not significant (P = 0.058). At 3 months, there was a significant improvement in quality of life in the Hospital group (CRQ +16.3 +/- 3.1, P < 0.01, anova) and in the Community group (CRQ +10.2 +/- 4.9, P < 0.05, anova) but the difference between the groups was not significant. Following the initial 3-month programme, the dropout rate was high overall (73% by 12 months), and therefore data from the maintenance programme could not be analysed. CONCLUSIONS: A 3-month community-based exercise programme for patients with COPD did not improve 6MWD. The long-term retention rates in the programmes were poor.

PMID:15363006


**Diving emergencies [1] (multiple letters).**

Dey I, Poff D, et al.

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PMID:2004204467
Diagnostic dilemmas in inner ear decompression sickness.

Wong R, Walker M.

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Inner ear symptoms associated with diving illness may result from barotrauma or decompression sickness. Differentiation of the underlying pathology presents a diagnostic dilemma for the diving clinician, especially if remote from otological laboratories. We present a series of such cases, some of which were likely to be due to inner ear (vestibular) decompression sickness, and others which could be confused with this diagnosis. These cases highlight the diagnostic and management dilemmas involved.

PMID:2004202622


Peritoneal mesothelial cells produce cytokines in a murine model of peritonitis.

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BACKGROUND: Many of the effector mechanisms that characterize peritonitis are generated by neutrophils and macrophages. However, it is now appreciated that peritoneal mesothelial cells can also produce mediators of inflammation when grown in culture. This study tested the hypothesis that peritoneal mesothelial cells produce inflammation-related cytokines in a murine model of peritonitis.

METHODS: Fifty Wistar rats were randomized to either a control group or a peritonitis group. Groups of five animals were sacrificed at 4, 18, 24, 48, and 96 h after the induction of peritonitis, which was induced by the administration of 5 mg zymosan intra-peritoneally. Control animals received an equal volume of phosphate-buffered saline. Monolayers of peritoneal mesothelial cells were obtained using an imprint technique. The expression and production of TNFalpha, IL-1beta, IL-10, and ICAM-I were determined using semi-quantitative reverse transcription- polymerase chain reaction, immunocytochemistry, and Western blotting. RESULTS: The mesothelial cells significantly expressed TNFalpha, IL-1beta, IL-10, and ICAM-I in a time-dependent manner. We were able to demonstrate increased production for each of these cytokines, and this coincided with the initial shedding of mesothelial cells and their regeneration within 96 h. CONCLUSIONS: Peritoneal mesothelial cells play a role in peritonitis by producing inflammation- associated cytokines. This implies that they may be suitable targets for molecular interventions aimed at modulating the effects of peritonitis.

PMID:15684793


[Diagnosis and prevention of uric acid stones].

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Uric acid stones occur in 10% of all kidney stones and are the second most-common cause of urinary stones after calcium oxalate and calcium phosphate calculi. The most important risk factor for uric acid crystallization and stone formation is a low urine pH (below 5.5) rather than an increased urinary uric acid excretion. Main causes of low urine pH are tubular disorders (including gout), chronic diarrhea or severe dehydration. Uric acid stone disease can be prevented and these are one of the few urinary tract stones that can be dissolved successfully. The treatment of uric acid stones consists not only of hydration (urine volume above 2000 ml daily), but mainly of urine alkalization to pH values between 6.2 and 6.8. Urinary alkalization with potassium citrate or sodium bicarbonate is a highly effective treatment, resulting in dissolution of existing stones. Urinary uric acid excretion can be reduced by a low-purine diet. Potassium citrate is the treatment of choice for the prevention of recurrence of uric acid calculi. Allopurinol reduces the frequency of stone formation in hyperuricosuric patients with
recurrent uric acid stones and/or gout.
PMID:15493118