1. World J Surg 2010. [Epub ahead of print].

Measures to Prevent Surgical Site Infections: What Surgeons (Should) Do.

Diana M, Hübner M, Eisenring MC, Zanetti G, Troillet N, Demartines N.

Abstract

Background: The present study was designed to evaluate surgeons' strategies and adherence to preventive measures against surgical site infections (SSIs).

Materials and Methods: All surgeons participating in a prospective Swiss multicentric surveillance program for SSIs received a questionnaire developed from the 2008 National (United Kingdom) Institute for Health and Clinical Excellence (NICE) clinical guidelines on prevention and treatment of SSIs. We focused on perioperative management and surgical technique in hernia surgery, cholecystectomy, appendectomy, and colon surgery (COL).

Results: Forty-five of 50 surgeons contacted (90%) responded. Smoking cessation and nutritional screening are regularly propagated by 1/3 and 1/2 of surgeons, respectively. Thirty-eight percent practice bowel preparation before COL. Preoperative hair removal is routinely (90%) performed in the operating room with electric clippers. About 50% administer antibiotic prophylaxis within 30 min before incision. Intra-abdominal drains are common after COL (43%). Two thirds of respondents apply nonocclusive wound dressings that are manipulated after hand disinfection (87%). Dressings are usually changed on postoperative day (POD) 2 (75%), and wounds remain undressed on POD 2-3 or 4-5 (36% each).

Conclusions: Surgeons' strategies to prevent SSIs still differ widely. The adherence to the current NICE guidelines is low for many procedures regardless of the available level of evidence. Further research should provide convincing data in order to justify standardization of perioperative management.

2. MMWR Recomm Rep 2010; 59(RR-10): 1-36.

Prevention of Perinatal Group B Streptococcal Disease; Revised Guidelines from CDC, 2010.

Abstract

Despite substantial progress in prevention of perinatal group B streptococcal (GBS) disease since the 1990s, GBS remains the leading cause of early-onset neonatal sepsis in the United States. In 1996, CDC, in collaboration with relevant professional societies, published guidelines for the prevention of perinatal group B streptococcal disease (CDC. Prevention of perinatal group B streptococcal disease: a public health perspective. MMWR 1996; 45 [No. RR-7]); those guidelines were updated and republished in 2002 (CDC. Prevention of perinatal group B streptococcal disease: revised guidelines from CDC. MMWR 2002; 51 [No. RR-11]). In June 2009, a meeting of clinical and public health representatives was held to reevaluate prevention strategies on the basis of data collected after the issuance of the 2002 guidelines. This report presents CDC's updated guidelines, which have been endorsed by the American College of Obstetricians and Gynecologists, the American Academy of Pediatrics, the American College of Nurse-Midwives, the American Academy of Family Physicians, and the American Society for Microbiology. The recommendations were made on the basis of available evidence when such evidence was sufficient and on expert opinion when available evidence was insufficient. The key changes in the 2010 guidelines include the following: expanded recommendations on laboratory methods for the identification of GBS, clarification of the colony-count threshold required for reporting GBS detected in the urine of pregnant women, updated algorithms for GBS screening and intrapartum chemoprophylaxis for women with preterm labor or preterm premature rupture of membranes, a change in the recommended dose of penicillin-G for chemoprophylaxis, updated prophylaxis regimens for women with penicillin allergy, and a revised algorithm for management of newborns with respect to risk for early-onset GBS disease. Universal screening at 35-37 weeks' gestation for maternal GBS colonization and use of intrapartum antibiotic prophylaxis has resulted in substantial reductions in the burden of early-onset GBS disease among newborns. Although early-onset GBS disease has become relatively uncommon in recent years, the rates of maternal GBS colonization (and therefore the risk for early-onset GBS disease in the absence of intrapartum antibiotic prophylaxis) remain unchanged since the 1970s. Continued efforts are needed to sustain and improve on the progress achieved in the prevention of GBS disease. There also is a need to monitor for potential adverse consequences of intrapartum antibiotic prophylaxis (e.g., emergence of bacterial antimicrobial resistance or increased incidence or severity of non-GBS neonatal pathogens). In the absence of a licensed GBS vaccine, universal screening and intrapartum antibiotic prophylaxis continue to be the cornerstones of early-onset GBS disease prevention.

3. Skin Pharmacol Physiol 2010; 24(2): 57-66. [Epub ahead of print].

Transdermal Estradiol and Testosterone Transfer in Man: Existence, Models, and Strategies for Prevention.

Busse KL, Maibach HI.

Abstract

Background: Transdermal hormone application allows delivery of a clinically relevant hormone dose often with fewer systemic side effects than oral formulations. However, transdermal hormone transfer from a dosed individual to naïve interpersonal contact occurs and may cause significant hormone imbalance and adverse effects.

Methods: We reviewed PubMed, Medline, and Scopus articles from the years 1950 to 2010 for articles related to transdermal hormone transfer in the setting of in vivo and in vitro human and animal models. We used the following Unpublished trials were reviewed on the US Food and Drug Administration (FDA) website for product approval.

Results: Data reflecting in vivo transfer of transdermal estradiol and testosterone in man is available from case reports, clinical trials, and FDA product information. While results clearly show that transfer can occur, methods for measuring the effect are not standardized and are thus difficult to compare among positive and negative studies. No in vitro human studies or animal models have been developed to specifically examine transfer potential of transdermal estradiol or testosterone.

Conclusion: It is necessary to consider the mechanism behind transdermal hormone transfer and consider ways to enhance clinical benefits to the dosed individual while minimizing transfer to a naïve interpersonal contact. A detailed discussion of trial comparisons and future optimization methods may help enhance our understanding of the potential for transdermal hormone transfer and encourage development of newer formulations and/or application methods to minimize its occurrence.

4. Dig Dis 2010; 28(4-5): 609-614. [Epub 2010 Nov 18].

From Gastric Inflammation to Gastric Cancer.

Bornschein J, Kandulski A, Selgrad M, Malfertheiner P.

Abstract

The majority of gastric adenocarcinomas are related to chronic inflammation induced by Helicobacter pylori infection. For intestinal-type gastric cancer, a multistep process of mucosal alterations leading from gastritis via glandular atrophy, intestinal metaplasia and dysplasia to invasive carcinoma is well recognized. Ongoing clinical studies focus on a 'point of no return'. It is defined as a situation when certain alterations are no longer reversible by H. pylori eradication and progression to gastric cancer may continue. H. pylori affects the mucosal as well as the systemic immune response by secretion of cytokines and the recruitment of distinct inflammatory cells. The immune response is characterized by a balance between a Th1-dominated response and the recruitment of antigen-specific regulatory T cells that allow the bacteria to persist in human gastric mucosa. Besides immune-mediated effects, H. pylori induces cellular alterations as well as genetic alterations in genes that are essential for the epigenetic integrity and mucosal homeostasis. These genetic alterations during gastric cancer development are in focus of intensive research and should ultimately allow the identification of risk factors involved in gastric carcinogenesis. The detection of individuals at high risk for gastric cancer would help to design appropriate strategies for prevention and surveillance.

5. Eur J Public Health 2010. [Epub ahead of print].

Socio-economic differences in dysglycemia and lifestyle-related risk factors in the Finnish middle-aged population.

Wikström K, Lindström J, Tuomilehto J, Saaristo TE, Korpi-Hyövälti E, Oksa H, Vanhala M, Niskanen L, Keinänen-Kiukaanniemi S, Uusitupa M, Peltonen M.

Abstract

Background: The aim of this study was to investigate the association of socio-economic status (SES) with dysglycemia and the lifestyle-related risk factors, and to analyze to which extent known risk factors explain socio-economic differences in diabetes risk.

Methods: Two population-based cross-sectional surveys in Finland including 1696 men and 1946 women aged 45-64 years who participated in a health examination in 2004 or 2007. Dysglycemia was determined by an oral glucose tolerance test. Total type 2 diabetes (including previously known and screen-detected type 2 diabetes), impaired glucose tolerance and impaired fasting glucose formed the category of total dysglycemia. Questionnaires and clinical examination were completed to assess risk factors for dysglycemia. SES was defined by education and household income.

Results: In both genders, the prevalence of total dysglycemia differed statistically significantly between educational groups. Low education was statistically significantly associated with higher risk of total type 2 diabetes in women. The household income level was inversely associated with total type 2 diabetes in women and with total dysglycemia in men. Obesity, unhealthy diet and smoking were all inversely related to SES in both men and women. The observed association between education and dysglycemia was slightly attenuated after adjustment for obesity and other risk factors for diabetes.

Conclusions: Low education was associated with an increased risk of dysglycemia more strongly than the low household income. Risk factors, especially obesity, explained only partly the observed associations between dysglycemia and education.

6. Prog Neuropsychopharmacol Biol Psychiatry 2010. [Epub ahead of print].

Psychopharmacological comparison of schizophrenia spectrum disorder with and without cannabis dependency.

Makkos Z, Fejes L, Inczédy-Farkas G, Kassai-Farkas A, Faludi G, Lazary J.

Abstract

Background: Although incidence of schizophrenia is higher among cannabis users and marijuana is the most common abused drug by adolescents, etiological linkage between schizophrenia and cannabis use is still not clarified. Clinical experiences suggest that regular cannabis user can show similar psychotic episode to schizophrenic disorders but it still unclear if chronic cannabis use with schizophreniform disorder is a distinct entity requiring special therapy or it can be treated as classical schizophrenia. There are no data available on comparison of pharmacotherapy between schizophreniform patients with and without cannabis use.

Methods: Clinical data of 85 patients with schizophrenia spectrum disorder were analyzed retrospectively. Cannabis use was not reported by 43 persons (Cnbs0 subgroup) and 42 patients used regularly cannabis during at least 1year (Cnbs1 subgroup). Comparison of anamnesis, family history, social-demographic condition, positive and negative symptoms, acute and long-term therapy recorded by clinical interviews was performed with chi square tests, logistic binary regression and t-tests using SPSS 13.0 for Windows software.

Results: Men were over-represented in cannabis dependent group while mean age was lower among them compared to Cnbs0 subgroup. Prevalence of suicidal attempt was increased in men without cannabis use (OR = 5.25, p = 0.016). Patients without cannabis use spent more time in hospital (p = 0.026) and smoking was more frequent among them (OR = 1.36, p = 0.047). The chance to get olanzapine for acute therapy and aripiprazol for long term therapy was more than two fold in Cnbs1 subgroup (OR = 2.66, OR = 3.67, respectively). However, aripiprazol was used for acute therapy with significantly lower risk in Cnbs1 subgroup (OR = 0.47, p = 0.023). Olanzapine was administered for long term therapy in a higher dose to Cnbs0 patients (p = 0.040). Also higher dose of risperidon LAI was used in women without cannabis dependency compared to women of Cnbs1 subgroup (p = 0.020). Positive and negative symptoms and family history did not differ significantly between the two subgroups.

Conclusion: Although symptom profile was similar, hospitalization time, suicidal anamnesis, smoking habit and also dosage, intensity and lasting of therapy was different between the two subgroups. Further prospective studies are required for investigation of the clinical and molecular background of this discrepancy to determine a relevant protocol of prevention and treatment of the chronic cannabis use related psychotic disorder.

7. Expert Rev Vaccines 2010; 9(11): 1303-14.

Update on the current status of cytomegalovirus vaccines.

Sung H, Schleiss MR.

Abstract

Human cytomegalovirus (HCMV) is ubiquitous in all populations, and is the most commonly recognized cause of congenital viral infection in developed countries. On the basis of the economic costs saved and the improvement in quality of life that could potentially be conferred by a successful vaccine for prevention of congenital HCMV infection, the Institute of Medicine has identified HCMV vaccine development as a major public health priority. An effective vaccine could potentially also be beneficial in preventing or ameliorating HCMV disease in immunocompromised individuals. Although there are no licensed HCMV vaccines currently available, enormous progress has been made in the last decade, as evidenced by the recently reported results of a Phase II trial of a glycoprotein B vaccine for the prevention of HCMV infection in seronegative women of childbearing age. HCMV vaccines currently in clinical trials include: glycoprotein B subunit vaccines; alphavirus replicon particle vaccines; DNA vaccines; and live-attenuated vaccines. A variety of vaccine strategies are also being examined in preclinical systems and animal models of infection. These include: recombinant vesicular stomatitis virus vaccines; recombinant modified vaccinia virus Ankara; replication-deficient adenovirus-vectored vaccines; and recombinant live-attenuated virus vaccines generated by mutagenesis of cloned rodent CMV genomes maintained as bacterial artificial chromosomes in Escherichia coli. In this article, we provide an

overview of the current state of clinical trials and preclinical development of vaccines against HCMV, with an emphasis on studies that have been conducted in the past 5 years. We also summarize a number of recent advances in the study of the biology of HCMV, particularly with respect to epithelial and endothelial cell entry of the virus, which have implications for future vaccine design.

8. World J Gastroenterol 2010; 16(43): 5405-10.

Prevention of recurrence after surgery for Crohn's disease: Efficacy of infliximab.

Yamamoto T.

Abstract

After surgery for Crohn's disease (CD), early endoscopic lesions are frequently observed despite no symptomatic recurrence. The severity of lesions found at postoperative endoscopy is reported to be a strong predictive factor for future clinical recurrence. If endoscopic lesions in the early postoperative period can be reduced with medications, symptomatic recurrence will likely be delayed and decreased. Before the introduction of biologic therapies, various medications were used for the maintenance of clinical remission after surgery; however, few demonstrated consistent efficacy. Infliximab is a recombinant anti-tumor necrosis factor-α antibody. Although infliximab is one of the most effective medications in the management of CD, its efficacy for early endoscopic lesions after surgery has not yet been assessed. The author and colleagues recently conducted a prospective study in order to investigate the impact of infliximab on early endoscopic lesions after resection for CD. We found that infliximab therapy showed clear suppressive effects on clinical and endoscopic disease activity in patients with early endoscopic lesions after resection.

9. Curr Gastroenterol Rep 2010. [Epub ahead of print].

Primary Prevention of Variceal Hemorrhage.

Tsochatzis EA, Triantos CK, Garcovich M, Burroughs AK.

Abstract

Variceal hemorrhage is one of the leading causes of death in patients with cirrhosis, with the 6-week mortality after each episode ranging from 15% to 20%. The two main strategies for primary prevention of variceal bleeding in patients with cirrhosis and varices are the administration of nonselective β-blockers or the obliteration of varices with use of endoscopic band ligation. In this review, we present and critically review the latest data on primary prevention of variceal hemorrhage. We advocate that nonselective β-blockers should be the first line therapy, and band ligation should be offered only in cases of intolerance or side effects. We also explore potential future therapies based on preliminary experimental and clinical data.

10. Curr Neurol Neurosci Rep 2010. [Epub ahead of print].

Stroke Prevention Treatment of Patients with Atrial Fibrillation: Old and New.

Bal S, Ojha P, Hill MD.

Abstract

Atrial fibrillation is the most common cause of cardioembolic ischemic stroke and has a rising prevalence worldwide. Stroke prevention in this condition is poised to take a substantial leap forward with the evolution of new anticoagulant medications, with superior properties compared to vitamin K antagonists. New, safer and more effective chronic therapy is on the horizon. However, many issues surrounding the management of stroke prevention after an acute stroke and during the course of chronic anticoagulant therapy remain to be resolved.

11. Med Sci Sports Exerc 2010. [Epub ahead of print].

Cardiovascular Risk And Clinical Factors In Athletes: Ten Years Of Evaluation.

DE Matos LD, Caldeira ND, Perlingeiro PD, Dos Santos IL, Negrao CE, Azevedo LF.

Abstract

Purpose: Preparticipation screening in athletes is a very current but controversial theme. Part of this controversy is due to the cost benefit, especially when the screening is merely used as prevention of sudden cardiac death caused by rare and hereditary diseases. The purpose of this study was to describe the prevalence of pre-existing diseases, cardiovascular risk factor for cardiovascular diseases development and hematological profile in a population of amateur and professional athletes.

Methods: The data of 623 athletes (529 men, 94 women) from 13 to 77 years old were analyzed to detect pre-existing diseases. The variables total cholesterol, low density lipoprotein, high density lipoprotein, triglycerides, fasting glucose, body mass index, hemoglobin, hematocrit and ferritin were analyzed in 2 groups according to age: under and above 35 years old and their prevalence (%) and distribution in quartiles were presented. Chi-

square test and Pearson product-moment correlation coefficients between variables were applied and P < 0.05 was adopted for significance.

Results: Hypertension was the most prevalent pre-existing diseases while the data showed low prevalence of cardiomyopathy. Cardiovascular risk factors were prevalent in both genders. There were positive correlations between cardiovascular risk factors and age and between body mass index and lipid levels in male athletes. Also, there was high prevalence of low ferritin levels for women, with positive correlation between the levels of hemoglobin and ferritin.

Conclusion: In the present study, hypertension was the most prevalent diagnosed disease, and cardiovascular risk factors showed important prevalence, especially in athletes over 35 years old. Although physical training represents a cardioprotective factor to the onset of cardiovascular disease, it does not exclude the prevalence of risk factors and diseases in athletes.

12. Curr Opin Anaesthesiol 2010. [Epub ahead of print].

Prevention of atrial fibrillation after cardiac surgery.

Passannante AN.

Abstract

Purpose of Review: Atrial fibrillation after cardiac surgery remains a very common and vexing clinical problem. This review summarizes recent clinical and laboratory investigations, the results of which may lead to a more effective strategy for the prevention of atrial fibrillation after cardiac surgery.

Recent Findings: The incidence of atrial fibrillation after cardiac surgery remains high (60% in some series), and there is no single strategy that reliably prevents it. Age, prior history, valvular surgery, and left atrial pathology and dysfunction are associated with the development of postoperative atrial fibrillation. Mortality in patients who develop new-onset atrial fibrillation after cardiac surgery is increased. Drug treatment with beta-blockers, amiodarone, statins, steroids, magnesium, and sotalol can be effective in preventing postoperative atrial fibrillation. Current guidelines for the prevention of postoperative atrial fibrillation are underutilized, which offers an opportunity for improvement. A new drug, vernakalant, has proved effective and well tolerated for chemical conversion of atrial fibrillation after cardiac surgery to sinus rhythm.

Summary: Atrial fibrillation after cardiac surgery remains a dysrhythmia with significant implications. A more comprehensive, multimodal preventive strategy, using preoperative beta-blockers and statins, perioperative magnesium and steroids, and preoperative amiodarone in high-risk patients should be rigorously evaluated.

13. Br J Haematol 2010. doi: 10.1111/j.1365-2141.2010.08408.x. [Epub ahead of print].

Guidelines on travel-related venous thrombosis.

Watson HG, Baglin TP.

Abstract

Long duration travel is a weak risk factor for the development of venous thromboembolism (VTE). The incidence of VTE after flights of > h is 1 in 4 h in low and intermediate risk flyers is 4656 and for flights of more than 8 Severe symptomatic pulmonary embolism in the period immediately around 0·5% after travel is extremely rare after flights of < h. In flights over 128 VTE may be attributable to travel if it occurs up the rate is 5 per million. The risk of travel-related thrombosis is weeks following the journey to 8 higher in individuals with pre-existing risk factors for the development of VTE. There is no evidence for an association between dehydration and travel-associated VTE and so whilst maintaining good hydration is unlikely to be harmful it cannot be strongly recommended for prevention of thrombosis There is indirect evidence (recommendation grade 2, level of evidence, B) that maintaining mobility may prevent VTE and, in view of the likely pathogenesis of travel-related VTE, maintaining mobility is a reasonable Global use of h (2B) precaution for all travellers on journeys over 3 compression stockings and anticoagulants for long distance travel is not Assessment of risk should be made on an individual basis but indicated (1C) month), active malignancy, it is likely that recent major surgery (within 1 previous unprovoked VTE, previous travel-related VTE with no associated temporary risk factor or presence of more than one risk factor identifies those Travellers at the highest risk of travellers at highest thrombosis risk (1C) travel-related thrombosis undertaking journeys of > h should wear well 3 Where pharmacological prophylaxis fitted below knee compression hosiery (2B) is considered appropriate, anticoagulants as opposed to anti-platelet drugs are recommended based on the observation that, in other clinical scenarios, they provide more effective thromboprophylaxis. Usual contraindications to any form of thromboprophylaxis need to be borne in mind (2C).

14. Semin Reprod Med 2010; 28(6): 513-8. [Epub 2010 Nov 16].

Ovarian Hyperstimulation Syndrome Prevention Strategies: Cryopreservation of All Embryos.

D'Angelo A.

Consultant in Assisted Reproduction, IVF Wales; Clinical Lecturer, Cardiff University, University Hospital of Wales, Heath Park, Cardiff, United Kingdom.

Abstract

Ovarian hyperstimulation syndrome (OHSS) is an iatrogenic potentially life-threatening condition resulting from excessive ovarian stimulation. The crucial event in the development of OHSS is the administration of human chorionic gonadotropin (hCG). The early onset of OHSS typically presents in the luteal phase as a consequence of ovulatory hCG. The late onset of OHSS presents in early gestation when endogenous hCG further stimulates the ovary. Many strategies have been proposed for OHSS prevention, but they may reduce but not eliminate the risk. This article reviews the evidence related to the elective cryopreservation of all embryos and their subsequent transfer in women at risk of OHSS. More research is needed to determine whether using elective cryopreservation of embryos can reduce the rate of severe OHSS in in vitro insemination (IVF)/intracytoplasmic sperm injection (ICSI). Results from many retrospective studies are encouraging, but prevention in terms of (1) identification of the high-risk population using new biochemical markers of ovarian response such as anti-Müllerian hormone, (2) tailoring ovarian stimulation and using less aggressive protocols (gonadotropin-releasing hormone antagonists or mild IVF), and (3) blastocyst culture to allow clinical monitoring of early-onset OHSS, with eventual blastocyst cryopreservation, might represent a multistep approach worth further investigation.

15. Semin Reprod Med. 2010 Nov;28(6):475-485. [Epub 2010 Nov 16].

Ovarian Hyperstimulation Syndrome Prevention Strategies: Reducing the Human Chorionic Gonadotropin Trigger Dose.

Kashyap S, Parker K, Cedars MI, Rosenwaks Z.

Abstract

This article reviews the biological plausibility and evidence for the use of a low triggering dose of human chorionic gonadotropin (hCG) in the prevention of ovarian hyperstimulation syndrome (OHSS). A systematic search of the literature revealed very little published data for or against the use of low-dose hCG in the prevention of OHSS after assisted reproductive technology. We have had success at avoiding OHSS as a result of gentle stimulation and low-dose sliding scale hCG trigger based on estradiol (E (2)) levels. We therefore present the biological plausibility for such an approach by reviewing the relationship between OHSS, vascular endothelial growth factor, and hCG; the physiology of hCG; the relationship between risk of OHSS and E (2) at trigger; and the physiology of alternative methods of triggering such as recombinant luteinizing hormone and gonadotropin-releasing hormone agonist. We also present the results of a quasi-experimental before and after study of the sliding scale protocol for hCG trigger dose in in vitro fertilization with or without intracytoplasmic sperm injection cycles.

16. Semin Reprod Med. 2010 Nov;28(6):468-474. [Epub 2010 Nov 16].

Ovarian Hyperstimulation Syndrome Prevention Strategies: Oral Contraceptive Pills-Dual Gonadotropin-Releasing Hormone Agonist Suppression with Step-Down Gonadotropin Protocols.

Damario MA.

Abstract

The identification of patients at high risk for excessive responses to ovarian stimulation for in vitro fertilization and embryo transfer is essential in the tailoring of safe and effective treatment strategies. Known factors associated with increased sensitivity to gonadotropins include polycystic ovary syndrome, young age, prior ovarian hyperstimulation syndrome (OHSS), high baseline antral follicle count, and high baseline ovarian volume. Although several treatment strategies have been proposed for these patients, this report describes the experience using the dual suppression with gonadotropin step-down protocol. This protocol uses oral contraceptive pretreatment in combination with a long gonadotropin-releasing hormone agonist followed by a programmed step-down in gonadotropin dosing. Hormonal characteristics of dual suppression include an improved luteinizing hormone-to-follicle-stimulating hormone ratio and lower serum androgens, particularly dehydroepiandrosterone sulfate. Clinical characteristics of the protocol include a lower cancellation rate and favorable clinical and ongoing pregnancy rates per initiated cycle while mitigating the risk of OHSS.

17. Subst Abuse Treat Prev Policy 2010; 5(1): 29. [Epub ahead of print].

Self-reported tobacco smoking practices among medical students and their perceptions towards training about tobacco smoking in medical curricula: A cross-sectional, questionnaire survey in Malaysia, India, Pakistan, Nepal, and Bangladesh.

Sreeramareddy CT, Suri S, Menezes RG, Harsha Kumar HN, Rahman M, Islam MR, Pereira XV, Shah M, Sathian B, Shetty U, Vaswani VR.

Abstract

Background: Tobacco smoking issues in developing countries are usually taught non-systematically as and when the topic arose. The World Health Organisation and Global Health Professional Student Survey (GHPSS) have suggested introducing a separate integrated tobacco module into medical school curricula. Our aim was to assess medical students' tobacco smoking habits, their practices towards patients' smoking habits and attitude towards teaching about smoking in medical schools.

Methods: A cross-sectional questionnaire survey was carried out among final year undergraduate medical students in Malaysia, India, Nepal, Pakistan, and Bangladesh. An anonymous, self-administered questionnaire included items on demographic information, students' current practices about patients' tobacco smoking habits, their perception towards tobacco education in medical schools on a five point Likert scale. Questions about tobacco smoking habits were adapted from GHPSS questionnaire. An 'ever smoker' was defined as one who had smoked during lifetime, even if had tried a few puffs once or twice. 'Current smoker' was defined as those who had smoked tobacco product on one or more days in the preceding month of the survey. Descriptive statistics were calculated.

Results: Overall response rate was 81.6% (922/1130). Median age was 22 years while 50.7% were males and 48.2% were females. The overall prevalence of 'ever smokers' and 'current smokers' was 31.7% and 13.1% respectively. A majority (> 80%) of students asked the patients about their smoking habits during clinical postings/clerkships. Only a third of them did counselling, and assessed the patients' willingness to quit. Majority of the students agreed about doctors' role in tobacco control as being role models, competence in smoking cessation methods, counseling, and the need for training about tobacco cessation in medical schools. About 50% agreed that current curriculum teaches about tobacco smoking but not systematically and should be included as a separate module. Majority of the students indicated that topics about health effects, nicotine addiction and its treatment, counselling, prevention of relapse were important or very important in training about tobacco smoking.

Conclusion: Medical educators should consider revising medical curricula to improve training about tobacco smoking cessation in medical schools. Our results should be supported by surveys from other medical schools in developing countries of Asia.

18. Expert Rev Anticancer Ther 2010; 10(11): 1797-809.

Recent advances in the prevention and treatment of skin cancer using photodynamic therapy.

Zhao B, He YY.

Abstract

Photodynamic therapy (PDT) is a noninvasive procedure that involves a photosensitizing drug and its subsequent activation by light to produce reactive oxygen species that specifically destroy target cells. Recently, PDT has been widely used in treating non-melanoma skin malignancies, the most common cancer in the USA, with superior cosmetic outcomes compared with conventional therapies. The topical 'photosensitizers' commonly used are 5-aminolevulinic acid (ALA) and its esterified derivative methyl 5-aminolevulinate, which are precursors of the endogenous photosensitizer protoporphyrin IX. After treatment with ALA or methyl 5-aminolevulinate, protoporphyrin IX preferentially accumulates in the lesion area of various skin diseases, which allows not only PDT treatment but also fluorescence diagnosis with ALA-induced porphyrins. Susceptible lesions include various forms of non-melanoma skin cancer such as actinic keratosis, basal cell carcinoma and squamous cell carcinoma. The most recent and promising developments in PDT include the discovery of new photosensitizers, the exploitation of new drug delivery systems and the combination of other modalities, which will all contribute to increasing PDT therapeutic efficacy and improving outcome. This article summarizes the main principles of PDT and its current clinical use in the management of non-melanoma skin cancers, as well as recent developments and possible future research directions.

19. Adv Ther 2010. [Epub ahead of print].

Lasofoxifene in osteoporosis and its place in therapy.

Swan VJ, Hamilton CJ, Jamal SA.

Abstract

Selective estrogen-receptor modulators (SERMs), which have estrogen-like effects on bone and "antiestrogen effects" on other tissues, have been in development for osteoporosis prevention and treatment in postmenopausal

women as a safer alternative to long-term estrogen. We conducted a literature review of the skeletal and extraskeletal effects of lasofoxifene, a new generation SERM approved by the European Commission for osteoporosis treatment. Published data on the effects of lasofoxifene are based on 23 clinical pharmacology studies with over 10,000 participants from 17 phase 2 and 3 randomized controlled trials (RCTs). In RCTs, lasofoxifene decreases bone turnover markers (BTMs), increases bone mineral density (BMD) at the spine and hip, and decreases the incidence of vertebral and nonvertebral nonhip fractures compared with placebo. Compared with raloxifene, lasofoxifene gave greater decreases in BTMs, and greater increases in lumbar spine BMD. Lasofoxifene also decreased the risk of breast cancer, major coronary heart disease events, and stroke, but-similar to raloxifene-there was an increased risk of venous thromboembolism. In one trial, endometrial hypertrophy and uterine polyps were more common with lasofoxifene than with placebo, but endometrial cancer and hyperplasia were not. Lasofoxifene is probably most appropriate for use among women in their early or middle menopausal years (age 55-65) who have, or are at risk of developing, osteoporosis and in particular vertebral fractures. At the time of publication, lasofoxifene is not approved for use by the US Food and Drug Administration, and as such is not used in North America.

20. Internist (Berl) 2010. [Epub ahead of print].

[Complications due to contrast agent administration: What has been confirmed in prevention?]

Schönenberger E, Mühler M, Dewey M.

Abstract

Computed tomography (CT) and magnetic resonance imaging (MRI) have been evaluated by internists to be the most important medical innovations. Often, intravenous contrast agent administration is required for answering the clinical questions to CT and MRI. In this review we present an overview of the most common and most important aspects that need to be considered prior to intravenous contrast agent administration. We discuss aspects of renal impairment (contrast-induced nephropathy, nephrogenic systemic fibrosis), allergy-like reactions, hyperthyroidism, and pregnancy and breast-feeding.

21. Transplantation 2010. [Epub ahead of print].

Prevention of Chronic Renal Allograft Rejection by Soluble CD83.

Lan Z, Lian D, Liu W, Arp J, Charlton B, Ge W, Brand S, Healey D, Debenedette M, Nicolette C, Garcia B, Wang H.

Abstract

Background: Recombinant human soluble CD83 had previously exhibited significant immunosuppressive properties that involved interference with dendritic cell maturation in both mouse and humans, inhibition of autoimmunity in mice, and induction of antigen-specific mouse cardiac allograft tolerance when used in combination with other immunosuppressive drugs. Our current research focus turned to examining the effects of peritransplant soluble CD83 (sCD83) administration on prevention of chronic renal allograft rejection.

Methods: Fisher344-to-Lewis orthotopic rat renal transplants were performed with sequential recipient killing on postoperative days (PODs) 2, 14, and 140 to examine both the acute and chronic effects of peritransplant sCD83 treatment in rat recipients.

Results: Recipients treated with sCD83 exhibited a marked decrease in IgM and IgG deposition in the graft and antidonor antibody levels in the circulation, as early as POD14 and persisting until POD140. sCD83 treatment also reduced the infiltration of T cells and monocytes into the graft tissue and inhibited intragraft expression of MyD88 and inflammatory cytokine levels during the observation period. sCD83-treated grafts demonstrated normal histology beyond POD140, including dramatic reductions in tubular atrophy and interstitial fibrosis compared with untreated recipients.

Conclusion: We have demonstrated that peritransplant treatment with recombinant sCD83 attenuates both innate and adaptive immune responses and leads to prevention of chronic rejection in a rat renal transplant model. Because sCD83 is of human origin, the therapeutic approach used in our rodent transplant model holds significant promise for clinical transplantation.

22. Clin J Sport Med 2010; 20(6): 407-12.

The prevention of sport injury: an analysis of 12 000 published manuscripts.

Klügl M, Shrier I, McBain K, Shultz R, Meeuwisse WH, Garza D, Matheson GO.

Abstract

Objective: To identify the nature and extent of research in sport injury prevention with respect to 3 main categories: (1) training, (2) equipment, and (3) rules and regulations.

Data Sources: We searched PubMed, CINAHL, Web of Science, Embase, and SPORTDiscus to retrieve all sports injury prevention publications. Articles were categorized according to the translating research into injury prevention practice model.

Results: We retrieved 11 859 articles published since 1938. Fifty-six percent (n = 6641) of publications were nonresearch (review articles and editorials). Publications documenting incidence (n = 1354) and etiology (n = 2558) were the most common original research articles (33% of total). Articles reporting preventive measures (n = 708) and efficacy (n = 460) were less common (10% of the total), and those investigating implementation (n = 162) and effectiveness (n = 32) were rare (1% of total). Six hundred seventy-seven studies focused on equipment and devices to protect against injury, whereas 551 investigated various forms of physical training related to injury prevention. Surprisingly, publications studying changes in rules and regulations aimed at increasing safety and reducing injuries were rare (< 1%; n = 63) with a peak of only 20 articles over the most recent 5-year period and an average of 10 articles over the preceding 5-year blocks of time.

Conclusions: Only 492 of 11 859 publications actually assessed the effectiveness of sports injury prevention interventions or their implementation. Research in the area of regulatory change is underrepresented and might represent one of the greatest opportunities to prevent injury.

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Predictive Role of the Nighttime Blood Pressure.

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Abstract

Numerous studies addressed the predictive value of the nighttime blood pressure (BP) as captured by ambulatory monitoring. However, arbitrary cutoff limits in dichotomized analyses of continuous variables, data dredging across selected subgroups, extrapolation of cross-sectional studies to prospective outcomes, and lack of comprehensive adjustments for confounders make interpretation of the literature difficult. We reviewed prospective studies with total mortality or a composite cardiovascular end point as an outcome in relation to the level and the circadian profile of systolic BP. We analyzed studies in hypertensive patients (n = 23’856) separately from those in individuals randomly recruited from populations (n = 9641). We pooled summary statistics and individual subject data, respectively. In both patients and populations, in analyses in which nighttime BP was additionally adjusted for daytime BP and vice versa, nighttime BP was a stronger predictor than daytime BP. With adjustment for the 24-hour BP, both the night-to-day BP ratio and dipping status remained significant predictors of outcome but added little prognostic value over and beyond the 24-hour BP level. In the absence of conclusive evidence proving that nondipping is a reversible risk factor, the option whether or not to restore the diurnal blood pressure profile to a normal pattern should be left to the clinical judgment of doctors and should be individualized for each patient. Current guidelines on the interpretation of ambulatory BP recording need to be updated.