Consultant's Corner

Practical Answers To Your Everyday Questions

Preventing Superinfections

1. How can we prevent patients from getting superinfections? Is it more dangerous to admit patients or just treat them on an outpatient basis?

Question submitted by:
Dr. Vincenzo Visconti
Sherwood Park, Alberta

Prevention of "superinfections", especially nosocomial infections, has been proven very difficult. Clearly, simple measures such as proper hand hygiene are very effective, but achieving good compliance has been astonishingly difficult. Proper wound care, aseptic handling of instruments and catheters, surgical wound prophylaxis and good environmental cleaning are among the many procedures shown to reduce the transmission of infection. Spread of infection in hospitals will always be problematic because of the high incidence of primary infections, invasive procedures and opportunities for spread to patients who are often immunosuppressed and debilitated. High rates of antibiotic use lead to multi-resistant organisms. Crowded conditions and understaffing exacerbate the problem. Outpatient and home care reduce some of these risk factors, but to some extent also transfer some of the in-hospital risk to these settings.

Answered by:
Dr. Michael Libman

Sacral Dimpling in a Newborn

2. Should significant sacral dimpling be investigated in a healthy newborn? And if so, how?

Question submitted by:
Anonymous

Significant sacral dimpling when present is usually a normal variant and does not have any implications for future health. However, very few infants with significant sacral dimpling may have spina bifida occulta which is a form of spina bidida, in which the skin covers the bony defect in the spine. In this case, functional symptoms may develop later in life, which may include impairment in bowel control. Spina bifida occulta can, if necessary, be managed with surgery, but must first be diagnosed. Thus, in babies with a significant sacral dimple, screening with ultrasound is a reasonable first step. In the case of a positive ultrasound or if there is uncertainty, an MRI scan of the spine and then consultation with a neurosurgeon with pediatric expertise would be indicated.

Answered by:
Dr. Michael Rieder

Vitamin D Levels

3. Who should be checked for serum vitamin D levels?

Question submitted by:
Dr. Vincent Luykenaar
Coaldale, Alberta

Vitamin D deficiency and insufficiency are more common than appreciated. Recent studies have demonstrated that up to 60% of individuals, particularly the elderly, have vitamin D insufficiency and a significant number have vitamin D deficiency.

Vitamin D is responsible for good bone health and also has effects on improving muscle strength, reduction of falls and may have a role in prevention of certain types of cancers as well. It is not clear as to whether screening the population at large for vitamin D insufficiency would be cost-effective or necessary. However, I would recommend checking vitamin D levels in patients with osteoporosis (particularly if it is severe or not responding appropriately to pharmacologic intervention), in patients with celiac disease and other malabsorption syndromes and in persons who live at higher latitudes, where exposure to sunlight is reduced.

Answered by:
Dr. Hasnain Khandwala

Natriuretic Peptide

4. Can we test natriuretic peptide in clinical practice?

Question submitted by:
Dr. A. Schlanger
Toronto, Ontario

Brain natriuretic peptide (BNP) is a polypeptide secreted by the ventricles of the heart in response to excessive stretching of the heart muscles. The physiologic actions of BNP decrease systemic vascular resistance and central venous pressure as well as increase natriuresis to decrease the plasma volume.

Both BNP and N-terminal fragment pro-B-type natriuretic peptide (NT-proBNP) levels are used for diagnosis of acute congestive heart failure and it is useful in establishing prognosis in heart failure. Patients with symptomatic or asymptomatic left ventricular dysfunction have elevated plasma levels of BNP and NT-proBNP. BNP and NT-proBNP tests have high sensitivity but rather low specificity. These tests are useful to exclude heart failure as the diagnosis when their levels are low. BNP can be elevated in renal failure and decreased in obesity. Lab and bedside testing of BNP and NT-ProBNP is now available clinically.

Answered by:
Dr. Chi-Ming Chow

Investigating Post-Menopausal Ovarian Cysts

5.

What is the proper follow-up/ investigations for a post-menopausal (PM) woman with ovarian cysts (OCs)?

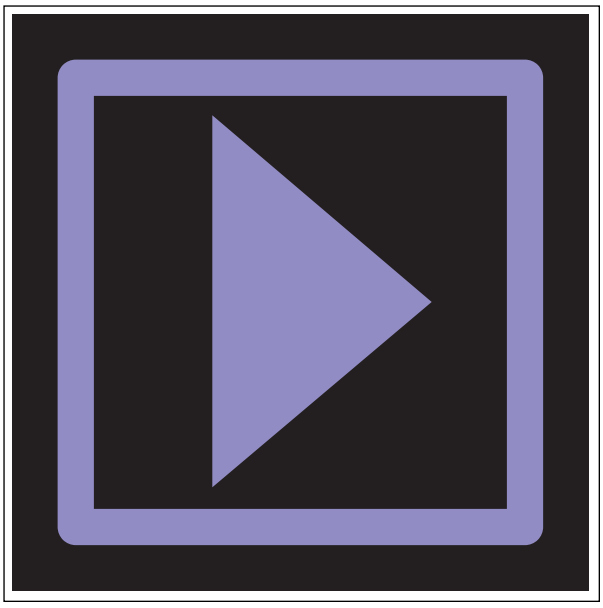
Question submitted by:
Dr. J. Gerard Hamilton
Belleville, Ontario

Up to 20% of PM women have asymptomatic OCs diagnosed incidentally on imaging investigations such as a CT scan ordered for other reasons. OCs are best imaged with combined transvaginal/pelvic ultrasound (TVPUS). Although the CA125 blood test is not meant as a screening test for ovarian cancer, it is being used to help stratify problematic OCs for referral and treatment from more likely benign but observable OCs.

Thus, the initial investigation of an OC is with TVPUS and CA125 level. OCs that are unilocular up to 5 cm with normal CA125 are at very low risk of malignancy and can be left alone. More complex OCs with multiple septae, solid components and papillations should be referred, as should cysts associated with an elevated CA125 level. Up to 50% of Stage 1 ovarian cancers have a normal CA125 level, while several benign conditions such as pelvic inflammatory disease and endometriosis have CA125 levels in the hundreds, so it is very important to educate patients about the limitations of this test. Symptomatic OCs should be referred.

Answered by:

Dr. Cathy Popadiuk



Follow-up for Hepatic Steatosis

6.

What is the follow-up of a patient who has hepatic steatosis with high AST, ALT?

Question submitted by:
Anonymous

The spectrum of fatty liver disease ranges from steatosis (fatty liver with normal enzymes) to steatohepatitis (fatty liver associated with inflammation and high ALT/AST) to cirrhosis. Fatty liver disease is now the most common cause for elevated liver function tests in North America. If steatohepatitis is present but a history of alcohol use is not, the condition is termed nonalcoholic steatohepatitis (NASH). NASH can be quite serious. Of patients with steatohepatitis, 10% will progress to fibrosis and cirrhosis. The complications associated with cirrhosis including variceal bleeding, ascites, encephalopathy and liver failure may also occur in these patients. The most common association with fatty liver disease is metabolic syndrome (Type 2 diabetes, obesity and/or hypertriglyceridemia).

These patients need to be followed to ensure that:

- they are compliant with a low fat diet,
- the other components of the metabolic syndrome are treated,
- they abstain from alcohol,
- they lose weight of one to two pounds per week and
- exercise regularly including both CV fitness and weight training.

Weight loss and control of comorbidities appear to slow the disease and to possibly reverse some of the steatosis and even fibrosis. No proven pharmacological treatment is available for NASH. Multiple studies are ongoing to evaluate the role of lipid-lowering agents as well as insulin sensitizers.

Patients with fatty liver disease should be seen regularly and monitored for disease progression through examination for clinical findings of decompensated liver disease such as splenomegaly, encephalopathy, ascites and peripheral edema, as well as, laboratory abnormalities including thrombocytopenia, elevated bilirubin and decreasing albumin.

The only way to firmly diagnose NASH is with a liver biopsy. Often, a clinical picture of obesity, hypertriglyceridemia and elevated transaminases is enough to conclude that a patient has NASH. Liver biopsy should be arranged in patients who have not had an improvement in their liver enzymes after one year of treatment, in patients in whom the diagnosis is uncertain or if there is a suspicion of cirrhosis.

Answered by:

Dr. Jerry S. McGrath

Reaction to Propofol

7.

What percentage of patients with egg allergies will react to propofol?

Question submitted by:
Dr. E. D. Chao
Prince Albert, Saskatchewan

Propofol is a general anesthetic prepared in an emulsion of soybean oil and egg lecithin. The soybean oil is highly purified, bleached and deodorized, thereby removing the potentially allergenic soy protein. The resultant purified soybean oil is non-allergenic in soy allergic patients.

The other component in the propofol vehicle is egg lecithin, also known as phosphatidylcholine. Lecithin is a phospholipid, not a protein. Whereas proteins, especially glycoproteins, are recognized allergens, phospholipids are not. Phospholipids do not act as haptens and do not possess IgE binding sites, unlike the major egg allergens, ovalbumin and ovomucoid. To the extent that egg lecithin is purified and free of contaminating egg protein, the lecithin will not trigger allergic reactions in egg-allergic patients.

There is one published case report describing anaphylaxis following administration of propofol and rocuronium in a 14-month-old boy with known allergies to peanut and egg. However, no investigations were done to identify the cause of the anaphylactic reaction.

Resource
1. Hofer KN, McCarthy MW, Buck ML, et al: Possible Anaphylaxis After Propofol in a Child With Food Allergy. Ann Pharmacother 2003; 37(3):398-401.

Answered by:

Dr. Peter Vadas

Cauterization for Plantar Warts

8.

How effective is cauterization for plantar/palmar warts?

Question submitted by:
Anonymous

Cauterization is usually performed after curettage of warts, usually on the feet. It has a significant risk of inducing a scar. This is problematic on the palmoplantar areas due to induction of sometimes painful scars that interfere with walking or handling things. As well, the notion of giving a patient a permanent scar in place of a self resolving lesion seems like a poor trade.

However, if a large plantar wart is very painful and interfering with daily activities cauterization can occasionally be useful. However, I take pains to explain to the patient the other alternatives–no treatment with the anticipation of spontaneous resolution (which can take five to 10 years), cryotherapy, topical agents, immunotherapy–all which carry much less risk of scarring.

Answered by:

Dr. Scott Murray

Clipping of the Frenulum

9.

Please comment on the renewed interest in clipping the frenulum of newborns who seem to be having problems breastfeeding.

Question submitted by:
Dr. Douglas A. Neal
Woodstock, Ontario

Breastfeeding is very popular and indeed the preferred feeding option for infants. While it is true that ankyloglossia can on occasion impede breastfeeding, in fact it would be anticipated that this would be a rare event.

Historically, many unnecessary tongue clippings were performed and the frenulum should only be clipped if there is a clear indication. In the case of a breastfeeding baby, if the baby is having trouble gaining weight and the mother is having discomfort from breast tenderness related to a poorly coordinated suck, then it would be reasonable to consider having the frenulum clipped. However, frenulum clipping should only be done if there is a problem, rather than in anticipation of one.

Answered by:

Dr. Michael Rieder

Chondromalacia Patella

10.

What is the latest treatment in chondromalacia patella (CMP) in women?

Question submitted by:
Dr. Maury O'Neil
Collingwood, Ontario

CMP refers to the loss of patello-femoral cartilage. In young adults, the pain is often related to quadriceps muscle and hip abductor muscle weakness and physiotherapy can relieve the pain. In older adults, there is often a component of osteoarthritis of the patello-femoral joint. Conservative treatment such as rest, ice, stretching and strengthening are the most important treatment modalities. Foot orthotics can control excessive over- pronation or supination. Intra-articular injections of corticosteroids and/or glycosaminoglycans may ease pain so that strengthening exercises may be performed more easily. Some patients benefit from patellar taping.

Answered by:

Dr. Elizabeth Hazel

Treating *H. Pylori* in the Pregnant or Nursing

11.

What is the best way to treat an *H. Pylori* positive patient who is pregnant or nursing?

Question submitted by:
Dr. Sundeep Banwatt
Mississauga, Ontario

H. pylori is a chronic infection of the stomach. It has been associated with peptic ulcer disease, gastric lymphoma and dyspepsia. When *H. pylori* infection is detected it is recommended that patients should undergo therapy.

In all likelihood the mother acquired the *H. pylori* infection as a child and has had it prior to her pregancy. In a pregnant or nursing patient, this needs to be weighted against the risks of the medications to the mother and child.

The standard treatment for *H. pylori* is a combination of a PPI, clarithromycin and amoxicillin. PPIs and amoxicillin are generally safe in pregnancy and both have a pregnancy risk factor of B.

However, the manufacturer of clarithromycin recommends that it not be used in a pregnant or breastfeeding woman unless there are no alternatives to therapy. It is given a pregnancy risk factor of C. Metronidazole is an alternative to clarithromycin. It is given a pregnancy risk factor of B, however, it is suggested to stop breastfeeding for 12 to 24 hours following single dose therapy to allow drug excretion.

I would recommend delaying treatment of this chronic infection while a woman is breastfeeding or pregnant unless it is deemed absolutely necessary.

Answered by:

Dr. Jerry S. McGrath

Lowering Genital Warts with the HPV Vaccine

12.

Does the new HPV vaccine lower the genital warts transmission rate?

Question submitted by:
Dr. Peter Chee
New Glasgow, Nova Scotia

The HPV vaccine currently licensed in Canada is composed of virus-like particles from four HPV genotypes: types 16 and 18 are associated with up to 70% of cervical cancers and types 6 and 11 cause up to 90% of genital warts. The introduction of the HPV vaccine is therefore expected to have a favourable impact on the transmission of genital warts. However, since only girls and young women are currently targeted to receive the HPV vaccine, the full potential benefit of the vaccine on wart transmission rates may not be realized.

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Answered by:

Dr. Michael Libman