Consultant's Corner

Practical Answers To Your Everyday Questions

Bowel Preparation for Colonoscopy

1. What is the safest bowel preparation for colonoscopy?

Question submitted by:
Dr. Corey Burton
St. George, New Brunswick

Colonoscopy requires visualization of the entire mucosal surface and a complete cleansing is required. A proper and thorough colonic preparation is a crucial factor in determining the quality, difficulty, speed and completeness of colonoscopy.

Oral preparations using a balanced electrolyte solution with polyethylene glycol (PEG) are the preferred methods for colonoscopy preparation. Several studies have demonstrated that balanced electrolyte solutions containing PEG provide excellent results superior to other means. They are also reasonably tolerated. A meta-analysis that included eight controlled trials comparing PEG to sodium phosphate preparations found that PEG preparations were superior.

Sodium phosphate preparations are safe in most healthy individuals, but a growing number of reports have demonstrated serious electrolyte and renal complications in some patients. Thus, they are no longer routinely recommended.

Answered by:
Dr. Jerry McGrath

Recurrent Bacterial Vaginosis

2. What would you suggest for a 25-year-old patient who frequently presents with bacterial vaginosis (BV)?

Question submitted by:
Dr. Diane Giroux
Montreal, Quebec

The normal bacterial flora in the vagina has a preponderance of lactobacilli that keep the environment acidic. Where there is a change in the balance of bacteria towards a more alkaline pH, an overgrowth of other bacteria, especially anaerobes, can occur causing symptoms of abnormal discharge and foul odour. Usually a short course of standard antibiotics eradicates the overgrowth of other bacteria allowing the lactobacilli to replenish. Oral or vaginal metronidazole for seven days suffices. Repetitive episodes of BV can occur in 20% to 30% of women. Treatment of the partner with antibiotics does not impact on symptoms but condom use may be helpful. For repetitive BV infection, chronic suppressive therapy with metronidazole vaginal gel is suggested—0.75% gel for 10 days followed by twice weekly applications for three to six months. Long-term clindamycin preparations are not suggested due to side-effect and toxicity profiles.

Answered by:
Dr. Cathy Popadiuk

Pediatric Murmurs

3.

Should every pediatric murmur (found on routine exam) be investigated? What is the best enlargement—cardiac ECHO or referral?

Question submitted by:
Dr. Jennifer Kask
Campbell River, British Columbia

Every cardiac murmur heard in a child should be investigated, but the first step is a careful history and physical. The child's general health and activity should be determined, as well as, any symptoms suggestive of cardiac disease. The examination should include assessment of cardiac rhythm and rate, as well as, BP. Examination should be conducted with the child upright as well as recumbent. Up to a third of children have an innocent murmur at some time during childhood. Characteristics of innocent murmurs include the fact that they are systolic, change in character or intensity with change in position and vibratory or musical quality. In the case of a vibratory systolic murmur that changes with posture and an otherwise normal examination, reassurance and follow-up are all that are required. If any testing is needed, an EKG and chest radiograph should be sufficient. It is important that parents of children with innocent murmurs understand that limitation of the child's activity is not only unnecessary but may be harmful. The presence of a pansystolic or diastolic murmur should always prompt further evaluation and referral to a pediatric cardiologist, as should the presence of a murmur associated with cardiac symptoms such as failure to thrive or shortness of breath with usual activities of childhood.

Answered by:

Dr. Michael Rieder

Removal of Tattoos

4.

How difficult is it to remove tattoos and what are the chances of scarring?

Question submitted by:
Dr. Mark D'Souza
Willowdale, Ontario

Removing tattoos is far more difficult than having them put on. Lasers (usually nd: yag, ruby, alexandrite, *etc*.) act by breaking up the pigment so it can be removed by the patient's lymphatics. The response depends on the susceptibility of the particular ink to the wavelength used and usually requires multiple treatments.

In many cases, total removal of the ink may not be possible. These selective lasers do have the advantage of minimizing scarring compared to other therapies such as CO_2, argon lasers, surgery or dermabrasion. These latter treatments almost always scar to some extent.

Answered by:

Dr. Scott Murray

H1N1 Mortality Rate

5.

What is the mortality rate for H1N1 infection relative to different age groups?

Question submitted by:
Dr. F. Foley
Toronto, Ontario

The mortality rate subsequent to H1N1 infection has been a controversial and complex issue. Mortality from influenza has rarely been studied directly. The usual estimates are derived by calculating the excess mortality on a seasonal basis, attributing the excess which is seen during the period when influenza is prevalent to the virus. In some cases, this is further restricted by looking only at death linked to respiratory causes. It is taken for granted that influenza contributes to death in diverse ways, often unrecognized at the time of death and thus not necessarily recorded on the death certificate. Most deaths have been attributed not to direct viral pathology, but due to exacerbation of chronic respiratory or cardiac disease, diabetes, *etc*. During the current epidemic, efforts at etiologic diagnosis have been much more intensive, causing difficulties in comparisons with data from prior years. Nonetheless, the general trends are clear. Although total mortality during this epidemic does not appear to be increased, the age distribution has been altered remarkably. Both the incidence of disease and the proportional mortality in older children and young adults (and especially pregnant women) has greatly increased over recent historical rates, although mortality still remains rare in absolute terms. Even more interesting has been the decrease in incidence (although not necessarily proportionate morbidity) in the older age group, defined in this outbreak as those born before 1957. This is presumed to represent the likelihood of exposure to the 1918 to 1919 H1N1 strain, which continued to circulate until about that time. We will surely have much more information on this subject after the current season has ended.

Answered by:

Dr. Michael Libman

Epinephrine Injection Usage

6. For shellfish allergies, should the patient be given an epinephrine injection or not?

Question submitted by:
Dr. Charles Lynde
Markham, Ontario

Over 200 foods have been reported to cause allergic reactions. The eight foods most commonly implicated in causing allergic reactions are:

- peanut,
- tree nuts,
- fish shellfish,
- wheat,
- soy,
- milk,
- egg and
- sesame seed.

Sesame seed is also becoming an increasingly common cause of allergic reactions in the North American population. Any of these foods may cause allergic reactions, ranging from mild through to life-threatening, but reactions to peanut, tree nuts and shellfish account for most of the fatal food-induced allergic reactions.

Risk factors for severe or fatal anaphylaxis include a history of severe allergic reactions in the past, a history of asthma (especially poorly controlled asthma), a relatively large exposure to the allergenic food and delayed administration of epinephrine. Individuals with any of these risk factors must carry an epinephrine auto-injector, wear a Medic Alert™ bracelet and take stringent precautions to avoid the food(s) in question, including trace exposure and exposure by cross-contamination.

Answered by:

Dr. Peter Vadas

Pros and Cons of Anticoagulant Therapy

7. What pros and cons are to be explained to patients for anticoagulant therapy?

Question submitted by:
Dr. Sanjay H. Santdasani
Virden, Manitoba

Warfarin is prescribed to patients who are at increased risk for developing harmful blood clots. This includes patients with mechanical valves, atrial fibrillation, or venous thromboembolism. One should make sure the benefits outweigh the risks when decisions are made to anticoagulate patients using warfarin.

The major complication associated with warfarin is bleeding due to excessive anticoagulation. Signs of unusual bleeding include:

- gum bleeding,
- blood in the urine,
- bloody or dark stool,
- nosebleed or
- vomiting blood.

Because the risk of bleeding increases as the INR rises, the INR should be closely monitored and adjustments are made to maintain the INR within the target range. Warfarin can also cause skin necrosis or gangrene. This is a rare complication that may occur during the first several days of warfarin therapy.

Certain foods and supplements can interfere with the effectiveness of warfarin. Foods rich in vitamin K (*e.g.*, broccoli, spinach, lettuce, cabbage, kale) can reduce the effectiveness of warfarin. Excessive amounts of alcohol consumption can also increase the risk of bleeding.

Answered by:

Dr. Chi-Ming Chow

Tourette's Syndrome Management

8.

What is the usual management for excessive shakes in Tourette's syndrome (TS)?

Question submitted by:
Dr. Jennifer L. Thomas
Brampton, Ontario

TS is characterized by brief movements (motor tics), sounds (vocal tics) and uncomfortable somatic sensations (pressure, tickle or warmth that is localized to specific body parts). In > 50% of patients, the disorder is accompanied by a variety of behavioural disturbances including obsessive-compulsive disorder and attention deficit hyperactivity disorder. In most individuals with TS, the symptoms are mild and do not require any medications. Education of the patient, family, school and modifying the environment at home and school so that the individual can work at their own pace are important non-pharmacological treatment options.

If the motor tics are embarrassing or disabling, pharmacotherapy is often necessary. Treatment usually begins with α-agonists. Clonidine has been used most extensively and should be started at very low doses (0.05 mg q.d.) and slowly increase to the effective dose which should not exceed 0.5 mg q.d. in divided doses. Side- effects include:

- hypotension,
- dizziness and
- headache.

Neuroleptics and atypical antipsychotic medications are more effective at suppressing the motor tics but are prone to more side-effects. Risperidone, clozapine and quetiapine are commonly used antipsychotic medications. In cases that are more resistant, catecholamine depletors such as tetrabenazine may be needed. It is generally recommend that patients requiring the later classes of medications should be evaluated by a neurologist, preferably in a "Movement Disorders Clinic."

Answered by:

Dr. Ashfaq Shuaib

Leukemia Treatments

9.

What are the newer remedies for leukemia since the abandonment of bone marrow transplantation?

Question submitted by:
Dr. Irene D'Souza
Willowdale, Ontario

It is important to know that bone marrow transplantation has not been abandoned and remains an important therapeutic option in specific patient populations. Bone marrow transplantation is more correctly referred to as stem cell transplantation. The majority of stem cells are harvested from the peripheral blood after a donor has been primed with an agent to mobilize these cells from the bone marrow compartment to the peripheral blood. Stem cell transplantations whether they be autologous (from the patients themselves) or allogeneic (from another individual) are still extensively performed for numerous hematologic malignancies including various leukemias.

Answered by:

Dr. Kang Howson-Jan and Dr. Cyrus Hsia

Vitamins for Fatty Liver Disease

10. What vitamins are suggested for fatty liver disease and why?

Question submitted by:
Dr. B. Lynn Crosby
Halifax, Nova Scotia

The spectrum of fatty liver disease ranges from hepatic steatosis seen alone on ultrasound to nonalcoholic steatohepatitis, to end stage liver disease (cirrhosis). Patients with isolated hepatic steatosis should undergo nutritional counselling, lose weight and avoid alcohol. Some studies have looked at vitamin supplementation in these patients as well. It has been observed that vitamin E decreases oxidative stress. This provides a rationale for its use in patients with non-alcoholic steatohepatitis. A reduction in aminotransferases with vitamin E was observed in a randomized controlled trial comparing vitamin E alone to vitamin E with pioglitazone, however, liver histology only improved in those taking combined therapy.[1]

Another placebo-controlled trial concluded that six months of treatment with a combination of 1,000 IU of vitamin E and 1,000 mg of vitamin C was associated with improvement in liver fibrosis but no benefit on necroinflammatory activity.[2]

The above studies are considered weak due to low patient enrollment. Recent concerns related to an increase in mortality with vitamin E supplementation have also been raised. Thus, it is not recommended that vitamin E supplementation be taken in patients with fatty liver.

References:
1. Sanyal AJ, Mofrad PS, Contos MJ, et al: A Pilot Study Of Vitamin E Versus Vitamin E and Pioglitazone for The Treatment Of Nonalcoholic Steatohepatitis. Clin Gastroenterol Hepatol 2004; 2(12):1107-15.
2. Harrison SA, Torgerson S, Hayashi P, et al: Vitamin E and Vitamin C Treatment Improves Fibrosis In Patients With Nonalcoholic Steatohepatitis. Am J Gastroenterol 2003; 98(11):2485-90.

Answered by:

Dr. Jerry McGrath

Dermatological Treatments

11. What is the latest on treatment recommendations for chronic eczema and atopic dermatitis?

Question submitted by:
Dr. Irene D'Souza
Willowdale, Ontario

Current management is still based on good skin maintenence with hydration, eliminating irritants and allergens and stress reduction. In terms of medical agents, steroids are still the mainstay of acute management, but the introduction of calcineurin inhibitors (tacrolimus, pimecrolimus) has added a new dimension for flare prevention. They can be used long-term without fear of steroid side-effects such as skin atrophy to prevent acute flares of severe eczema.

Answered by:

Dr. Scott Murray

Cyclical Vomiting Syndrome

12.

Can you comment on the treatments and causes of cyclical vomiting syndrome?

Question submitted by:
Anonymous

Cyclic vomiting, which is defined as recurrent, stereotypical episodes of vomiting in a child who is otherwise in good health, is not an uncommon problem in children, with one study estimating a point prevalence in a Scottish population of 1%. The accepted diagnostic criteria are three or more discrete episodes of vomiting that are stereotypical in terms of timing of onset, symptoms and duration with varying intervals of normal health. The pathophysiology is unclear, with the most common association being between cyclic vomiting and migraine. Of interest, while the natural history is that most children will outgrow cyclic vomiting in their teens, many of them go on to develop migraine headaches. Treatment of an acute episode is symptomatic and includes antiemetics and hydration, intravenously if necessary. Ondansetron has been among the antiemetics most commonly used anecdotally. It has also been suggested that early use of IV dextrose may help to shorten an attack, although again this is largely anecdotal and there is no good evidence to support this. The most common preventive therapy used in children has been amitriptyline in a starting dose of 0.5 mg/kg h.s., with dose increases up to 1.0 mg/kg p.r.n., with care being taken with respect to the cardiotoxicity of this agent and with monitoring (including EKG with special reference to the QT interval) on an on-going basis. Propranolol and cyproheptadine have been used as alternates. It should be emphasized that there is very little evidence supporting the use of these therapies and it is controversial if these therapies should be used in children less than five-years-of-age.

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Answered by:

Dr. Michael Rieder