Consultant's Corner

Practical Answers To Your Everyday Questions

Pauses Reported on a Holter Monitor

1. When are pauses reported on a Holter monitor a concern?

Question submitted by:
Dr. Laura McConnell
Mississauga, Ontario

Pauses of up to two seconds are common in the general population and are especially common in the elderly. These pauses are usually benign. The most frequent causes of pauses are blocked (non-conducted) premature atrial contractions, sinus arrhythmia, temporary pauses in the rate of discharge of the sinoatrial node (*i.e.*, sinus pauses) and medication-induced pauses. Pauses of longer than two seconds, especially when frequent and accompanied by episodes of significant bradycardia (< 40 bpm), suggest the possibility of sick sinus syndrome. Longer pauses (three seconds or greater) are more likely to be symptomatic and pathologic. Pacemaker implantation should be considered if there are symptoms of syncope, dizziness, or severe fatigue in association with prolonged pauses (*i.e.*, three seconds or more) or with persistent bradycardia.

Answered by:

Dr. Chi-Ming Chow

The HPV Vaccine

2. How long does the HPV vaccine provide immunity against the virus for? What is the frequency, major side-effects and safety of the vaccine?

Question submitted by:
Dr. Nathalie Saurion
Markham, Ontario

The duration of protection is a contentious debate at this time. There has been no "standard" serologic test for HPV. The two companies with vaccines, either approved or likely to be approved shortly, each have their own measures for serologic response to their own product. Indeed, viral biology suggests that antibody titres should not even be very relevant. We already have some evidence of breakthrough cases within five years of vaccination with the HPV vaccine. One of the companies claims their new vaccine will have a longer protection period, but this remains to be proven. It may well be that booster doses will be needed for full benefit. That said, there have been no major adverse reactions reported so far with the HPV vaccine. There are however, the expected local injection site reactions, fevers, *etc*.

Answered by:

Dr. Michael Libman

3. Low Thyroid-Stimulating Hormone Levels

I have a patient with a low thyroid-stimulating hormone (TSH) and free T4 (fT4). She is clinically well. I repeated her results two months later. They are the same. What should I do?

Question submitted by:
Anonymous
Westville, Nova Scotia

It would have helped if the actual levels of TSH and both the fT4 and fT3 would have been provided. If they are just barely below the reference range and the patient is euthyroid clinically, then I would not pursue extensive investigations and just repeat them in a few months' time. Low TSH and fT4/fT3 levels could be seen in patients who have been critically ill (sick euthyroid syndrome). Secondary hypothyroidism, due to hypothalamic-pituitary disorders also causes low TSH and fT4/fT3 levels. Occasionally, these results can be seen during the initial hypothyroid phase following hyperthyroidism in patients with thyroiditis. Some medications, such as phenytoin, amiodarone, *etc.*, may also produce such results. Rarely, mutation in the thyrotropin-releasing hormone (TRH) receptor can cause these as well. Surreptitious ingestion of T3 (liothyronine) can also give a low TSH and T4; however, the T3 level would be elevated. It would also be helpful to see if the patient has had previously normal thyroid function tests. I would suggest referring the patient to an endocrinologist if the repeat results remain abnormal.

Answered by:

Dr. Hasnain Khandwala

4. Colonoscopy Screening

Is screening colonoscopy justified in patients with no family history of bowel cancer?

Question submitted by:
Dr. Doug Drover
St John's, Newfoundland

Everyone is at risk of developing colorectal cancer. It is the third most common cancer and second with respect to cancer deaths. The Canadian Association of Gastroenterology recommends that individuals undergo colon cancer screening at age 50. This could include any of the following tests:

- Fecal occult blood testing
- Air contrast barium enema
- Sigmoidoscopy and air contrast barium enema
- Colonoscopy

Colonoscopy is the gold standard, but small polyps can be missed. Also, many hospitals have long wait lists and there is a risk of colonic perforation (1/1000 tests).

Answered by:

Dr. Jerry McGrath

Treatment for Tinea Unguium

5.

Does topical treatment work for tinea unguium?

Question submitted by:
Dr. Len Grbac
Toronto, Ontario

Over the years, we have searched for effective treatment for tinea of the nail plate. Topical therapies were never very effective and despite new advances—nail laquer containing antifungals and stronger antifungal creams—treating nail fungus topically is, at best, an uphill battle. There is evolving research with nanotechnology to see if antifungals can be made more penetrant for nails. Currently, the best therapies are the oral agents with all their pros and cons. However, physicians should be aware that even they are not a panacea for all nail fungal infections.

Answered by:

Dr. Scott Murray

The Antibiotic Choice for Bronchitis

6.

What is the antibiotic of choice for bronchitis if one is not sure that this is viral or bacterial?

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

The most important distinction to make when managing a case of bronchitis is between acute bronchitis and acute exacerbations of chronic bronchitis (AECB). Acute bronchitis is almost always a viral disease, although a few cases are caused by mycoplasma. Thus, an acute illness with cough and purulent sputum, sometimes with fever which is typically low grade and no clinical signs of lung consolidation, is rarely bacterial in origin. Several trials have shown the absence of any benefit of antibiotics in this scenario. These studies usually included an x-ray to exclude pneumonia, which is not always feasible in the office setting. When pneumonia cannot be excluded, it is sometimes necessary to treat following the guidelines for community acquired pneumonia. For AECB, patients with mild underlying disease can be treated with macrolides, second generation cephalosporins, or doxycycline. With more severe underlying disease, quinolones or amoxicillin/clavulanate should be considered.

Answered by:

Dr. Michael Libman

Marginal Blepharitis

7.

What treatment is recommended for marginal blepharitis?

Question submitted by:
Dr. Rice Taylor
Medicine Hat, Alberta

Blepharitis is defined as an inflammatory disease of the eyelids. It is commonly divided into anterior (marginal) and posterior blepharitis. There is, however, considerable overlap in these two types. Marginal blepharitis is usually centered around the meibomian orifices and the eyelash follicles and may be seborrheic or may be frankly infected, in which case it is usually staphylococcal. Blepharitis is a common condition affecting up to 20% of individuals in North America.

In all types of blepharitis, there is colonization of the lids, the lash follicles and the meibomian glands and their orifices by bacteria, usually *staphylococci*. The effects of this colonization are seen as local inflammation, often in the form of ulceration, but immune mediated damage can also produce marginal corneal ulcers which are thought to be a response to the staphylococcal bacterial wall.

Demodectic mites are also implicated in many patients with blepharitis. Blepharitis is also associated with rosacea, viral disease, allergic reactions, contact dermatitis and molluscum contagiosum. It may accompany Sjögren's syndrome.

Because chronic blepharitis is a lifelong disease and there is no definitive cure, treatment is directed at maintaining the cleanest lid margins possible. Unfortunately, the patient looking for a quick fix will shop around until someone prescribes a steroid/antibiotic combination. For the next five days, his eyes feel better than they have felt for years. Alas, the relief is only short-lived, but can lead to chronic misuse of these drug combinations.

The application of erythromycin ointment at night after lid hygiene, done for seven consecutive nights and repeated every four weeks (as required) is often effective. Omega 3 fatty acid supplements have recently been shown to be beneficial and for refractory cases, particularly those with rosacea, long-term doxycycline or minocycline can totally transform the lives of these patients. The mainstay of treatment is, however, lifelong lid hygiene using warm compresses or any of the commercially-available cleansers.

Answered by:

Dr. Malcolm Banks

Mesenteric Adenitis

8.

Can you discuss the diagnosis of mesenteric adenitis?

Question submitted by:
Dr. Laura McConnell
Mississauga, Ontario

Mesenteric enteritis is a diagnosis largely made by exclusion. It is, to be honest, a poorly understood disorder characterized by abdominal pain that can be very similar to the pain of appendicitis. Mesenteric adenitis pathologically is characterized by inflammation of intestinal lymph nodes. It is most common in temperate countries. The true incidence is not known, given that it is usually diagnosed either by exclusion or by the finding of a normal appendix and inflamed lymph nodes on exploratory laparotomy (not a common method of diagnosis in the era of ultrasound). The outcome is typically benign without treatment, except for the occasional patient who develops sepsis, in which case the signs and symptoms of septicaemia develop. While historically, as many as 20% of cases of clinically diagnosed appendicitis were due to mesenteric adenitis, the routine use of ultrasound for the diagnosis of appendicitis, which has its own inherent problems, does appear to have reduced the number of cases of mesenteric adenitis diagnosed in the operating theatre.

Answered by:

Dr. Michael Rieder

Follow-up ECG for Patients on Antipsychotics

9.

Should patients on antipsychotics have a baseline and follow-up ECG performed?

Question submitted by:
Dr. Vivian Kirk
British Columbia

QT interval can be prolonged by drug therapy, such as antipsychotics, antidepressants, class IA and class III antiarrhythmic agents and erythromycin. Hypokalemia, hypomagnesemia, bradycardia and female gender can increase the risk of drug-induced long-QT syndrome.

For patients treated with QT-prolonging medications, the recommendations are:

1) Perform baseline and follow-up ECGs to follow the corrected QT interval
2) Avoid using more than one QT-prolonging medication simultaneously
3) Avoid risk factors that would predispose patients to *torsades de pointes*, such as hypokalemia or hypomagnesemia

Answered by:

Dr. Chi-Ming Chow

10. Occasional Warfarin for Deep Vein Thrombosis

A new patient who has a history of two previous deep vein thrombosis' (DVTs) takes "a couple warfarin a day" for two days before air travel. At other times, he is on no medications. Is his routine likely to be of any benefit?

Question submitted by:
Dr. Gord Christie
Victoria, British Columbia

Two doses of 10 mg of warfarin will likely raise the INR in most patients, but there are no data that this is an efficacious form of DVT prophylaxis and poses a potential risk of bleeding. The scenario is complicated because we would need more information about the previous DVTs. In the simplest scenario, if the previous episodes were related to prolonged immobilization of the lower limbs, including a long voyage, then low molecular weight heparin would provide more reliable prophylaxis. If the previous DVTs did not have a precipitating event, we would recommend lifelong anticoagulation and investigations for hypercoagulability.

Answered by:

Dr. Kang Howson-Jan
Dr. Kamilia Rizkalla

Pityriasis Rosea

11. Is there a way to differentiate pityriasis rosea from other dermatologic conditions on the extremities?

Question submitted by:
Anonymous

There are certain clinical characteristics in terms of morphology, time course of lesions and distribution that may help. The main mimics of pityriasis rosea are guttate psoriasis (which lasts longer than the six weeks for pityriasis and more commonly also involves the lower extremities), secondary syphilis (which often involves palms/plantar surfaces), *etc*. In other words, sometimes pityriasis follows the text book course and appearance, but occassionally a dermatologic opinion is needed to identify atypical cases. A skin biopsy and syphilis serology will often be able to distinguish among these conditions.

Answered by:

Dr. Scott Murray

See prescribing summary and study parameters on page 66

Nocturnal Terrors in Children

12.

What should we do with a child who has nocturnal terrors?

Question submitted by:
Dr. Antoine St-Pierre
Charny, Quebec

Nocturnal terrors are more of a problem for the parent than the child, notably as the child appears to be very distressed and cannot be consoled during the episode. Night terrors or *pavor nocturnus* are seen in children aged two- to six-years-old and appear to be a disturbance of arousal, representing a partial arousal from non-rapid eye movement sleep. Children will typically sit upright, often with a look of panic on their face and then scream. This will last for between five and 30 minutes, during which the child cannot be consoled and after which the child returns to a normal sleep. Treatment for night terrors is entirely symptomatic and experts advise against trying to wake the child, as this usually only results in the child becoming frightened (mostly due to very understandable parental anxiety). It is best to ensure the child is safe, provide such comfort as can be appreciated by the child and assist the child in returning to sleep when the night terror has ended. If children have very frequent night terrors at the same time every night, it may be helpful to wake them before the usual time of the night terror, as this appears to affect the altered arousal state. Sleep medications have been used for short periods, but their efficacy and safety in children are problematic at best and are probably best avoided.

Answered by:

Dr. Michael Rieder

Right Bundle Branch Block

13.

What investigations, if any, for patients with right bundle branch block (RBBB)?

Question submitted by:
Dr. Cynthia Litteljohn
Burlington, Ontario

The prevalence of RBBB increases with age. The right bundle branch is vulnerable to stretch and trauma for two-thirds of its course when it is near the subendocardial surface. RBBB can be due to right ventricular pressure overload, such as cor pulmonale, pulmonary embolism, myocardial ischemia, or infarction. RBBB can also be caused by procedures, such as right heart catheter insertions. However, most patients with RBBB are asymptomatic and RBBB is discovered incidentally on ECG testing.

The prognosis of patients with RBBB depends largely on whether there is any underlying heart disease. The long-term outcomes of patients with isolated chronic RBBB are generally excellent.

When RBBB is noted, it is important to identify clinically any conditions that can cause RBBB. An echocardiogram is useful in identifying any underlying structural or valvular heart disease.

Answered by:

Dr. Chi-Ming Chow

Elevated Amylase Levels

14. What is significant of elevation of amylase with normal ultrasound in young patients (*i.e.*, teen/early 20s)?

Question submitted by:
Dr. Roy Kwee
Richmond Hill, Ontario

Amylase is found mainly in the pancreas and salivary glands. The function of amylase is to cleave starch into smaller polysaccharides. Amylase is also excreted by the reticuloendothelial system and the kidneys.

There are many conditions and drugs associated with an elevated amylase including:

- pancreatic diseases,
- cystic fibrosis,
- salivary diseases,
- GI diseases/neoplasm,
- gastroenteritis,
- celiac disease,
- ectopic pregnancy,
- ovarian or fallopian cysts,
- pelvic inflammatory disease,
- renal failure,
- alcoholism, or
- pregnancy.

The cause of the elevated amylase in some of these conditions is incompletely understood.

The cause of elevated amylase is most influenced by the clinical context in which it is measured. An elevated amylase level in a patient with acute upper abdominal pain most likely indicates the presence of pancreatitis. Serum lipase values are more specific than serum amylase levels in patients suspected of having acute pancreatitis.

Serum amylase levels may be elevated in settings in which amylase is bound to other macromolecules, forming complexes known as macroamylase. These larger complexes are poorly excreted and the amylase level as measured by serologic tests is increased. Such patients typically have chronically elevated serum amylase levels. Several diseases are associated with macroamylasemia, including:

- celiac disease,
- inflammatory bowel disease,
- lymphoma,
- HIV infection and
- rheumatoid arthritis.

Macroamylasemia may resolve in patients with celiac disease following a gluten-free diet.

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Answered by:

Dr. Jerry McGrath