Consultant's Corner

Practical Answers To Your Everyday Questions

Performing an ECG on a Patient with a Previous Asymptomatic MI

1.

What do we do when we perform an ECG on a patient with a previous asymptomatic MI? Do we consider the same management?

Question submitted by:
Dr. Claude Roberge
Sherbrooke, Québec

This is a common situation that we encounter during our day-to-day clinical practice. In general, pathological Q-waves suggestive of a prior myocardial infarction are those with:

1) Duration > 40 msec (width wider than one small block)
2) Depth greater than one-third of the total QRS complex, and
3) Recurrence Occurs in two or more leads in the same territory/contiguous lead grouping (I, aVL, V5,V6, V1-4, II, III, aVF)

It is important to assess the patient's overall cardiac risk factors and consider referring the patient for further cardiac assessments, including:

1) Transthoracic echocardiogram to assess the overall left ventricular systolic function and the presence of wall motion abnormalities
2) Exercise stress ECG or a stress imaging test to assess the risk and burden of coronary ischemia

Depending on the findings of these investigations, one can decide on appropriate lifestyle modification (weight management, smoking cessation), secondary cardiac risk prevention (antiplatelet, ACE inhibitors/ARB, statins, *etc*.), and possible referral to cardiac specialists for further investigation.

Answered by:
Dr. Chi-Ming Chow

Family History and Breast Cancer Screening

2.

At what age should a woman with a family history of breast cancer start mammographic screening?

Question submitted by:
Dr. Daniel Berendt
Edmonton, Alberta

A woman with a family history of breast cancer in a first degree relative should start annual mammography screening ten years before the age of diagnosis of this relative. For example, if the relative had breast cancer at 45-years-old, screening should start at 35-years-old. If there is a genetic predisposition for breast cancer in the family, such as BRCA1 or BRCA2, and the woman is a carrier or otherwise identified as having a high risk of a genetic mutation, then MRI is also used in conjunction with mammography. Breast MRI is not a screening test for the general population.

Answered by:
Dr. Cathy Popadiuk

Pacemakers for Gastroparesis

3.

How well do pacemakers work for gastroparesis?

Question submitted by:
Dr. Norman Chychota
Taber, Alberta

The gastric pacemaker is a novel approach to managing gastroparesis. Similar to a cardiac pacemaker, it is a reversible therapy that electrically stimulates the antrum of the stomach to help control nausea and vomiting.

This fully implantable system consists of two single-electrode intramuscular leads and a neurostimulator. The indications include documented gastroparesis that is of diabetic, idiopathic, or surgical etiology.

Symptoms should be present for more than a year, and patients should have failed medical treatment. This means they are refractory to, or intolerant of, prokinetic and antiemetic drugs.

Forster J, Sarosiek I, Lin Z, *et al*, evaluated 25 patients; 67% were considered successfully treated with a 50% decrease in total symptoms.[1] This study also demonstrated that gastric emptying is not improved, but that the pacemaker is actually a powerful antinausea and antiemetic therapy. Gastric pacemakers are not widely available.

Reference

1. Forster J, Sarosiek I, Lin Z, *et al:* Further Experience with Gastric Stimulation to Treat Drug Refractory Gastroparesis. Am J Surg. 2003;186(6):690–695.

Answered by:
Dr. Jerry McGrath

Describing Pap Smear Diagnoses

4.

Despite the adequate visualization of the cervix when doing a pap smear, the report received sometimes indicates "adequate for assessment," but "no transitional zone material?" How important is this and is a repeat necessary?

Question submitted by:
Dr. Robert Dickson
Hamilton, Ontario

More recently, a number of cytology laboratories have been using nomenclature such as "no transitional zone (TZ) material" or "no endocervical cells present" when describing pap smear diagnoses that are nonetheless "adequate for assessment" or "satisfactory." In the past, a lack of endocervical cells or TZ material implied incomplete sampling of the TZ, thus requiring a repeat pap smear in three months. Numerous studies have confirmed that having TZ cells present on pap smears, does not decrease the incidence of cervical cancer. Some cervical adenocarcinoma eludes detection by pap smears, but assuring all smears have TZ cells present has not made a difference in detection of abnormalities. As a result, cytopathologists now say that smear interpretation is satisfactory to make a diagnosis without having these deeper endocervical cells. Other newer biological markers are being investigated to help improve the sensitivity of pap smear.

Answered by:
Dr. Cathy Popadiuk

Is Calcium Absorption Decreased when Taking PPIs?

5.

For patients on chronic PPIs, is there a significant decrease in calcium absorption and osteoporosis risk, and should we consider calcium and vitamin D or fosomax, *etc.*

Question submitted by:
Dr. M. I. Ravalia
Twillingate, Newfoundland

Some recent studies have suggested an association between proton-pump inhibitor use (PPI), osteoporosis, and hip fractures. The mechanism was felt to be decreased calcium absorption and possibly through inhibition of osteoclastic vacuolar proton pumps. However, this information is suggested by case control studies, which often have confounding variables present.

If a patient is concerned about osteoporosis and the use of proton pump inhibitors, I generally reassure them and recommend that they take vitamin D (1,000 to 2,000 IU/day) and calcium (1,500 mg/day).

Answered by:
Dr. Jerry McGrath

Treating Facial Eczema in a Five-month-old

6.

What is the safest way to treat facial eczema in a five-month-old?

Question submitted by:
Dr. Lorna D'Silva
Oakville, Ontario

The first step is to define the cause of the eruption. Is it irritation, allergy, or atopic dermatitis? Bland therapies are the best, including moisturizers, compresses, or removal of irritants, such as gently washing away acidic contactants, such as juices and foods. Low dose hydrocortisone creams can be helpful, and the advent of calcineurin inhibitors has added another option to avoid steroid use on the face.

If a facial eczema is not responding to conservative therapy with mild steroids, a referral to a dermatologist should be considered.

Answered by:
Dr. Scott Murray

Best Treatment for Paranoia and Delusions

7. What are the best ways to treat for paranoia and delusions?

Question submitted by:
Dr. P.C. Noble
Oshawa, Ontario

Paranoia and delusions are common symptoms experienced by patients diagnosed with paranoid personality disorder (PPD), a cluster A personality disorder. There are three different personality disorder classes, A=Mad, B=Bad and C=Sad. Another common symptom experienced in PPD is unrelenting mistrust and suspicion of others, even when such suspicion is unwarranted. These feelings often interfere with the person's ability to form close social relationships with others. These symptoms often first present in young adulthood and occur more frequently in women than men. While the exact cause of PPD is unknown, it is thought to involve a combination of biological (*e.g.*, genetics, as well as a possible genetic link to schizophrenia) and psychological factors (*e.g.*, early childhood experiences involving physical or emotional trauma). A thorough history, including medications and street drugs, used may help to determine non organic causes.

Paranoia, delusions, and subsequent behaviour can significantly interfere with a person's ability to function and maintain social relationships. In fact, the effects of such thoughts and behaviours can ripple outward and affect other members of the person's pre-existing social network, and, as such, it can be considered a bio-psycho-social disorder. Since PPD is a chronic disorder that may last throughout a person's life, it is often important to consider possible treatment options. It should be noted that there is a paucity of data in the literature evaluating the various options and the efficacy of such approaches.

Psychotherapy, including dialectical behaviour therapy (DBT) and root-cause analysis, are considered to be the first line of treatment for people with PPD. DBT is a cognitive-behavioural approach that focuses on behavioural change while providing acceptance, compassion, and validation of the patient. This type of psychotherapy has been studied in several randomized trials and has been shown to be efficacious in the treatment of various types of personality disorders.

However, this type of approach can be challenging for healthcare professionals, because its success is often based upon a fundamental trust between the psychotherapist and patient, for whom distrust is an underlying symptom of PPD. With this knowledge, the psychotherapist must attempt to help the patient develop general coping skills (including new and productive ways of dealing with uncomfortable situations), improve social communication and interactions, as well as build mechanisms for developing enhanced self-esteem.

While psychotherapy is generally used by itself, medication may also be used in people who have extreme symptoms or in those with other concurrent mental health disorders that could ameliorate with treatment, such as anxiety or depression. In such patients, antidepressants and low-dose antipsychotics have demonstrated some efficacy. Anti-anxiety medications may also be of value if underlying anxiety is contributed to by the patient's paranoia and delusions.

Unfortunately, patients with PPD are prone to resisting treatment as they often are not aware of the problem and its impact on family and friends. In such cases, patient outcomes may be poor. Consequently, it is essential for healthcare professional to attempt to build a trusting relationship with the patient over time so that the patient becomes more accepting of potential treatment options.

References

1. Grant BF, Hasin DS, Stinson FS, *et al*: Prevalence, Correlates, and Disability of Personality Disorders in the United States: Results from the National Epidemiologic Survey on Alcohol and Related Conditions. J of Clin Psychiatry. 2004;65(7):948–58.
2. Kendler KS, Gruenberg AM: Genetic Relationship Between Paranoid Personality Disorder and the "Schizophrenic Spectrum" Disorders. Am J of Psychiatry. 1982;139(9):1185–6.
3. Reus VI, Harrison's Online: Chapter 386: Mental Disorders. http://www.accessmedicine.com. Accessed October, 2009.
4. Shedler J, Westen D: Refining Personality Disorder Diagnosis: Integrating Science and Practice. Am J Psychiatry. 2004;161(8):1350–65.
5. Webb CT, Levinson DF: Schizotypal and Paranoid Personality Disorder in the Relatives of Patients with Schizophrenia and Affective Disorders: A Review. Schizophrenia Research. 1993;11(1):81–92.

Answered by:
Professor Joel Lamoure
Contributor:
Professor Jessica Stovel

Treatment of "Bull's Eye Rash"

8.

A 60-year-old woman had a "bull's eye rash" 12 years ago. She did not consult a doctor at that time, but took a photo. Is treatment worthwhile at this time?

Question submitted by:
Dr. Monique Letellier
Montréal, Québec

A "bull's eye rash" or erythema chronicum migrans (ECM), is a fairly pathognomonic feature of early Lyme disease, appearing a few days to one month after the patient is biten by an infected tick. It is clear that at least 10% of those infected have no symptoms at any stage, even without any treatment. Thus, it is quite possible to have Lyme disease that resolves spontaneously, and, if serology is performed in endemic areas, many individuals will be found to be seropositive but will not recall having a typical rash or other signs of infection.

Some experts recommend treating these individuals on the grounds that this may represent early asymptomatic disease, which might progress later. Treating an asymptomatic individual whose infection is known to have occurred years ago is likely to be pointless. Of course, anyone with a history of ECM who has evidence of possible late Lyme disease, such as chronic arthritis, should be treated, as these manifestations often improve with therapy.

The more difficult problem is when subtle non specific manifestations are present, such as vague neurocognitive difficulties. In these cases, if the patient is seropositive, or if a very clear history of ECM can be obtained, treatment for neurologic Lyme disease (IV) is probably warranted. Clearly, the proportion of cases with non-specific symptomatology where the symptoms are in fact due to late Lyme disease, is exceedingly low. Therefore, the likelihood of a response to Lyme disease treatment is correspondingly low.

Answered by:
Dr. Michael Libman

The Effects and Treatment of Fifth Disease

9.

A woman in her first trimester of pregnancy is exposed to her son who has a fever and face rash. She is worried about fifth disease exposure. What is the best approach to take next?

Question submitted by:
Dr. Dominic So
Mississauga, Ontario

Fifth disease is caused by Parvovirus 19 (PV). Its effects on children and adults are usually mild, resulting in fever, rash and arthralgias. Infection, however, during the first half of pregnancy, can have serious consequences. It can result in miscarriage in up to 15% of cases and later, towards twenty weeks gestation, can cause fetal anemia and hydrops with possible still birth in up to 2% of affected cases. If there is a concern about PV infection, it is important to assess the patient's immune status. If she has IgG antibodies present, then she has immunity. If she has no antibodies, she needs to be followed serologically for up to twelve weeks to identify if she will develop infection. If she does not develop infection and is not immune, she should be counseled to stay out of high risk environments such as schools and day care centers. If she has IgM and IgG antibodies, then she has an active infection and should be referred to an obstetrician for ongoing fetal monitoring with serial ultrasound and intervention if hydrops develops.

Answered by:
Dr. Cathy Popaduik

Adjustable Dental Appliances for Treatment of Snoring

10. Are adjustable dental appliances helpful in the treatment of snoring?

Question submitted by:
Dr. R. A. Orlando
Vancouver, British Columbia

Until two decades ago, snoring and apneas drew attention mainly as social curiosities and sleep apnea was not thought of as a serious disorder with multisystem involvement.

Snoring could indicate sleep apnea, a potentially life-threatening condition that requires medical attention.

Oral appliances (OAs) are now increasingly advocated as a treatment option for snoring and obstructive sleep apnea (OSA) in adults.

In patients diagnosed with snoring +/- mild OSA both the mandibular advancement splint and bite raising appliance designs of splint help to reduce the symptoms of snoring.

On the other hand, mandibular advancement devices (MADs) usually improve polysomnographic (PSG) indices. The evidence shows that there is no one MAD design that most effectively improves PSG indices, but that efficacy depends on a number of factors including:

- Severity of OSA
- Materials and method of fabrication
- Type of MAD (monobloc/twin block)
- The degree of protrusion (sagittal and vertical).

These findings highlight the absence of a universal definition of treatment success. Future trials of MAD designs need to be assessed according to agreed success criteria in order to guide clinical practice as to which design of OAs may be the most effective in the treatment of OSA. However, patients treated with an oral-appliance need a thorough follow-up by a specialist experienced in the field of sleep medicine.

Answered by:
Dr. Ted Tewfik

First-time Herpes Zoster in a 10-year-old

11.

In a healthy 10-year-old patient who presents with first-time herpes zoster, should bloodwork or investigation be done to determine the cause of it?

Question submitted by:
Dr. Naila Furgan
Mississauga, Ontario

Varicella zoster virus produces two distinctly different clinical problems, the first being chickenpox (varicella) and the second being shingles. In the case of a 10-year-old who presents with classical chickenpox, no bloodwork or investigations are indicated, as varicella is among the most contagious of the common infections and typically manifests itself in immunologically normal children. That being said, it is hoped that with varicalla immunization, chickenpox will become a thing of the past.

Varicella virus can also manifest as shingles, which presents as a unilateral vesicular eruption following a dermatome distribution. Shingles is most commonly a disease of older adults, in that it occurs when native immunity to shingles wanes. Thus, it is important to consider the possibility of immunodeficiency in children who present with shingles, and these children should be screened by means of a careful history and physical examination for potential risk factors, such as HIV infection or an unrecognized primary immunodeficiency. That being said, the majority of children who develop shingles are immunologically normal.

Answered by:
Dr. Michael Rieder

Screening for Type 2 Diabetes in Patients with FBS

12.

Should we be doing 2hr GTT on patients with normal fasting blood sugar (FBS), but positive family history of diabetes at annual checkups?

Question submitted by:
Dr. Nancy Olsen
Saskatoon, Saskatchewan

The short answer is no. Now for the long answer; the diagnosis of type 2 diabetes is generally established by documenting either a fasting blood sugar (FBS) of over 7.0 mmol/l, or 11.1 after a two hour 75 g oral glucose tolerance test (OGTT). In patients who have impaired fasting glucose (fasting blood sugar FBS between 6.0 to 6.9 mmol/l), less than 10 to 15% will be found to have diabetes on further testing with an OGTT. These numbers are much lower in patients with entirely normal FBS. Thus, it is likely that only one in several patients screened with OGTT's will have a positive result for diabetes. Recently, the Canadian Diabetes Association has recommended that an HbA1C over 6.5% may be used for the diagnosis of diabetes in lieu of FBS and OGTT. Thus, in your high risk patients, an A1C may be a quicker, cheaper option.

Answered by:
Dr. Hasnain Khandwala

Minimum Vaccination for Travel to India

13.

Minimum vaccination required for travel to india. Can one omit malaria prophy?

Question submitted by:
Dr. Sandhia Sharma
Vancouver, British Columbia

The question of "minimal prophylaxis" for travellers is difficult, largely because individuals vary in their attitudes towards rare, but potentially serious or lethal infections. The only non debatable issue is yellow fever vaccination, which the Indian government has made obligatory for those coming from a yellow fever endemic country (not Canada). Less weight can be placed on vaccines protecting against relatively benign or treatable illnesses, such as hepatitis A and typhoid, or very rare infections such as Japanese encephalitis. Individual attitudes about cost and risk tolereance, must be considered.

India is a tremendously diverse country, so it is no surprise that malaria risk varies by region and season. Luckily, compared to many other malaria-endemic countries, information on infection rates is relatively detailed and reliable for India. Therefore, viewing the entire country as having a mild to moderate risk factor is too simplistic. Basic information on the risk for a given itinerary is available on the website of the American Centers for Disease Control (www.cdc.gov<http://www.cdc.gov), and more detailed information can be obtained by referral to a travel medicine specialist (and I cannot overemphasize that the presence of a "Travel Clinic" sign in the window does not ensure expertise). For example, southern India in the winter, particularly urban areas, have a minimal malaria risk factor.

It is usually easy to find a safe and well tolerated regimen for malaria prophylaxis which can be used when the risk is anything more than negligible. In the end, however, I compare malaria prophylaxis to wearing a bicycle helmet: many of your patients do not wear helmets, but under what circumstances would you not recommend one?

Answered by:
Dr. Michael Libman

Medication for Symptoms of Acute Bereavement?

14. Do you advise medication for symptoms of acute bereavement?

Question submitted by:
Graham Worrall
Whitbourne, Newfoundland

The loss of a loved one and subsequent bereavement has been associated with high rates of major depressive episode (MDE).[1,2] Major depression in this population is common during the first year of bereavement, with the highest rates seen in earlier stages. That being said, MDE as a result of bereavement has been excluded from the Diagnostic and Statistical Manual of Mental Disorders (DSM-IV) diagnostic criteria for MDE (bereavement criterion E). The rationale behind this criterion is that sadness related to bereavement includes symptoms that resemble those found in persons with major depression but without the actual presence of major depressive disorder (MDD). Moreover, the exclusion of bereavement would prevent individuals who suffer from these unpleasant, yet transient, symptoms of depression from being diagnosed as having MDD. Instead, bereavement is considered only a stressful life event (SLE), which is in itself an exclusion criterion for a DSM axis I Diagnosis. Only once the depressive symptoms associated with bereavement continue beyond 2 months, would a DSM Axis I Diagnosis be considered.[1] Therefore, treatment for acute bereavement in the first two months after the loss of a loved one is generally not recommended, as it may interfere with the natural grieving processes.[2]

However, several doctors have questioned the validity of excluding bereavement from a diagnosis of major depression when all other diagnostic criteria are met. This concern is based on the finding in several studies that SLE, including bereavement, may contribute to the initiation and maintenance of MDD.[1] It has been suggested that the upcoming DSM-V should re-evaluate the inclusion of bereavement exclusion criteria E for major depression.[1,3]

While most mourners find ways to cope with their grief, allowing the symptoms of depression to resolve, approximately 9% of adults who have experienced the loss of a loved one will develop complicated grief (CG) reactions as part of a prolonged grief disorder (PGD).[2] PGD is defined as a combination of separation distress and cognitive, emotional, and behavioural symptoms that can develop after the loss of a close loved one. Symptoms that last for at least six months, result in significant impairment in social, occupational, and other areas of functioning; and may warrant pharmacotherapy, such as antidepressants or benzodiazpines. The grief reaction has also been associated with other medical complications, such as hypertension, cardiac conditions, substance abuse, and increased risk for suicidal behaviour.[2] Consequently, when acute bereavement transitions into PGD, treatment is warranted because the risk of complications is higher.[2] A recent meta-analysis demonstrated that treatment interventions can effectively diminish CG symptoms, while preventive measures were not found to be effective.[2]

References
1. Chouinard G, Chouinard VA, Corruble E: Beyond DSM-IV Bereavement Exclusion Criterion E for Major Depressive Disorder. Psychother Psychosom 2011;80(1):4–9.
2. Wittouck C, Van Autreve S, De Jaegere E, *et al:* The Prevention and Treatment of Complicated Grief: A Meta-analysis. Clin Psychol Rev 2011 Feb;31(1):69–78.
3. American Psychiatric Association DSM-5 Development. Report of the DSM-5 Mood Disorders Working Group. http://www.dsm5.org/progressreports/pages/0904reportofthedsm-vmooddisorder-sworkgroup.aspx. Accessed April, 2011.

Answered by:
Professor Joel Lamoure
Contributor:
Professor Jessica Stovel

Investigating Siblings of Children with Vesicoureteral Reflux

15.

In a child with vesicoureteral reflux, when and how should we investigate siblings?

Question submitted by:
Dr. Anne Monty
Montréal, Québec

The question of how to investigate siblings of children with proven vesicoureteral reflux is a good one, as up to 30% of children with radiographically proven reflux also have siblings with reflux. There are several options for investigation, including renal ultrasonography, voiding cystourethrography, and nuclear cystography. While renal ultrasonography is the easiest and most readily accessible method, this only provides information on the size of the kidney and collecting system; for the detection of true reflux, voiding cystourethrography or nuclear cystography would be the preferred investigation. Nuclear cystography has the advantage of a lower radiation exposure and has been suggested as the screening tool of choice for siblings of patients with known vesicoureteral reflux, but it is not available in all centres. With respect to when to screen, a study from Harvard suggested that early screening is important to prevent the potentiality of renal damage, and, thus, when the diagnosis of vesicoureteral reflux is made, it would be prudent to screen siblings on a timely basis.

Resource
1. Alejandro H, Martin C, Robert W. *et al:* Imaging Studies After a First Febrile Urinary Tract Infection in Young Children. N Engl J Med 2003; 348(3):195-202

Answered by:
Dr. Michael Rieder

Oral Therapy for Tinea Versicolor Eruption

16. Can you give suggestions for oral therapy of tinea versicolor eruption?

Question submitted by:
Dr. Guy Frenette
Cap-Santé, Québec

Tinea versicolor is caused by a dimorphic yeast *Pityrosporum versicolor*, which is generally responsive to anti yeast measures. These can be delivered in many forms, such as shampoos, soaps, creams, sprays, and in certain severe cases, oral forms. Generally, if a case is widespread and a rapid response is needed, ketoconazole, itraconazole, and difluconazole can be effective treatment options. These can be administered in small amounts. Ketoconazole, a 10 day 200 mg q.d. therapy and as a single-dose 400 mg treatment, is popular with comparable results in both forms.

There is some evidence that the medication is more effective when sweating is involved, so doses are often given before exercise. Fluconazole is often given as a single 150 to 300 mg weekly dose for two to four weeks. Itraconazole is usually given at 200 mg q.d. for seven days. Due to the recurrent nature of the eruption, a maintenance plan of topical therapy every few weeks can be used to prevent further outbreaks.

Answered by:
Dr. Scott Murray