Consultant's Corner

Practical Answers To Your Everyday Questions

1. Post-concussion Amnesia

Are there usual features of amnesia following an otherwise mild concussion (no LOC) to differentiate it from factitious or conversion disorders?

Question submitted by:
Dr. Sandi C. Frank
Edmonton, Alberta

Post-concussion amnesia (PTA) can present with a variety of clinical features depending on the severity of the injury. In addition to the history of recent head trauma and memory problems, the patient often has focal neurological signs, including cranial nerve palsies (especially 3, 4 or 6) and long tract signs (arm drift, Babinski's sign *etc*). There are no special features in the amnesia syndrome that are classic for PTA. Amnesia as a conversion reaction is uncommon and may be difficult to differentiate from PTA, especially if it occurs in the settings of a recent head injury. Clinical suspicion, fluctuating course and the absence of any definite focal neurological signs may alert the physician to the diagnosis of a conversion reaction.

Answered by:
Dr. Ashfaq Shuaib

2. Aggressive Insulin for Type 2 Diabetes

What is the current status on aggressive insulin for early type 2 diabetes?

Question submitted by:
Dr. B Roback
Victoria, British Columbia

Early use of insulin in the treatment of diabetes is a reasonable treatment option. However, most patients prefer oral hypoglycemic agents. Nonetheless, insulin treatment for newly diagnosed diabetics is perfectly reasonable if the patient is in agreement, or if there are contraindications to the use of oral agents. Studies have suggested that early aggressive insulin treatment in diabetes may produce a honeymoon period, like what is seen in type 1 diabetes. This may be due to the reduction of glucotoxicity on the ß cells through the use of insulin. Another study demonstrated better glycemic control with less weight gain in the intensive insulin treatment group compared to a strategy where multiple oral agents were used. Early insulin treatment is particularly attractive when the HbA1c is significantly elevated at the onset.

Answered by:
Dr. Hasnain Khandwala

Best Diagnostic Test for Vitamin B12 Deficiency

3.

What is the best diagnostic test to confirm a vitamin B12 deficiency?

Question submitted by:
Dr. Jean De Serres
Kirkland, Québec

There is no single best diagnostic test to confirm or rule out vitamin B12 deficiency. A clear history and physical exam will help rule out other causes of macrocytosis. The presence of macrocytic anemia or macrocytosis with neurologic symptoms should increase one's suspicion. To confirm B12 deficiency, one should have at least two separate values of low serum B12 levels, or a combination of a low serum B12 value with an elevated methylmalonic acid level. An elevated fasting homocysteine level will also likely be present. It is important to remember to perform these tests prior to vitamin B12 supplementation. The Schilling's test, or tests for intrinsic factor antibody (poor sensitivity), serum gastrin or pepsinogen I (poor specificity) or a combination are expensive, often not available, and should not be used to confirm vitamin B12 deficiency.

Answered by:
Dr. Cyrus Hsia and
Dr. Kang Howson-Jan

Multiple Sclerosis Patients and Osteoporosis

4.

Whereas most multiple sclerosis (MS) patients avoid heat because it increases fatigue and we have low sun exposure in winter, are MS patients at increased risk of osteoporosis? Should we supplement with vitamin D?

Question submitted by:
Dr. Wayne Sullivan
Halifax, Nova Scotia

Patients with multiple sclerosis are at an increased risk of vitamin D deficiency because of immobility. Furthermore, the risk of osteoporosis and fractures may be high given the use of corticosteroids, *etc*. It is reasonable to measure vitamin D levels in patients with multiple sclerosis and consider supplementation if they are indeed low. There is some evidence to suggest that these patients may need higher doses of vitamin D, up to 50,000 IU every one to two weeks to achieve normal levels. Measurement of vitamin D levels and titrating the vitamin D dose accordingly are the best options.

Answered by:
Dr. Hasnain Khandwala

Work-up for a Toddler Presenting with Failure to Thrive

5. What is the adequate work-up for a toddler presenting with failure to thrive?

Question submitted by:
Dr. Anne Manty
Montréal, Québec

The work-up for a toddler with Failure to Thrive begins with a careful history and physical examination, focusing on diet, environment, past history and other risk factors for failure to thrive, as well as a developmental assessment. A crucial part of this work-up is the evaluation of growth trajectory looking at height, weight and head circumference, as there are distinctly different aetiologies and different work-ups, depending on how the growth trajectory is proceeding. As an example, children with initially normal growth parameters, who have experienced incremental decreases in their weight percentile, with relative preservation of growth in height and head circumference, are more likely to have a psychosocial cause for failure to thrive. In these cases, exploring these issues and evaluating them using a carefully monitored growth and feeding plan, can provide the diagnosis.

In the case of children whose initial growth parameters are below population norms, consideration must be made for organic causes which may have been present prenatally, including genetic disorders. In the case of children who have been developing normally but then experience a decline in all growth parameters, an organic cause triggering this decline should be sought.

The work-up should be guided by the history and physical examination. Basic elements of the work-up should include a complete blood count, evaluation of renal and liver function and simple blood chemistry. More detailed studies should be conducted as indicated by history and physical examination, again emphasizing that the approach to failure to thrive is clinical, with the laboratory providing a supportive and confirmatory role.

Answered by:
Dr. Michael Rieder

HPV Vaccines for Cervical Cancer

6.

To prevent against cervical cancer, which one of the two HPV vaccines is the most effective?

Question submitted by:
Dr. Doris Deshaies
Verdun, Québec

At this point in time, there is no clinical data to suggest that one of the two HPV vaccines currently on the market is more effective than the other in terms of preventing cervical cancer. Both vaccines cover the same two serotypes known to be associated with the majority of cases of cervical cancer, and studies reveal very high rates of protection against infection by these serotypes. One of the vaccines also covers two other serotypes which are highly associated with genital warts, but there is no reason to believe that inclusion of these serotypes will have any significant effect on the prevention of cancer. The two vaccines have never been compared head to head in clinical trials, and this is unlikely to happen in the near future. The laboratory measures used for assessing serologic titres were different for the studies of the two vaccines, and not easy to compare. There is a suggestion that the bivalent vaccine may provide a longer duration of protection, but this remains speculative for now.

Answered by:
Dr. Michael Libman

Perioral Dermatitis Treatment in Pregnant/Breastfeeding Mothers

7.

What is the best treatment for perioral dermatitis in pregnant/ breastfeeding mothers? Topical treatment with noritate/cortisone/ clindoxyl failed.

Question submitted by:
Dr. Patrick Gonzales
Burlington, Ontario

Perioral dermatitis is a common eruption which can worsen with irritants. Benzoyl peroxide and retinoids often used for acne can intensify itching and redness. Since the physical characteristics of this condition (pustules) often lead to a misdiagnosis of acne, these agents are often tried, usually with poor results. Although perioral dermatitis shares many characteristics of rosacea, response to topical metronidazole is usually underwhelming. The best response is from oral tetracyclines, which are contraindicated in pregnancy. Erythromycin was used for years with success and a pristine record of safety in pregnancy until recent reports suggested some increase in cardiac side effects with use in the first trimester.[1] My usual practice is to remove all irritants, which include face creams, moisturizers, cosmetics. Simple cleanser may be used. In later stages of pregnancy, I suggest using erythromycin in a light lotion such as neutraderm. In severe cases I suggest the use of oral erythromycin, however, I find it best to try to hold off until delivery, if possible.

Reference
1. Källén BA, Otterblad-Olausson P, Danielsson B: Is Erythromycin Therapyteratogenic in Humans? Reprod Toxicol 2005;20(2):209-214

Answered by:
Dr. Scott Murray

Implications of Finding a Gall Bladder Polyp on CT/Ultra Sound

8. What are the implications of finding a gall bladder polyp on CT/U.S.? Can it cause symptoms? Do they pose a risk for cancerous change?

Question submitted by:

Dr. Stacey Saunders
Burin, Newfoundland

Gallbladder polyps are outgrowths of the mucosal wall, usually found incidentally on ultrasound. They have been observed in 1.5 to 4.5% of gallbladders assessed by ultrasonography. In one report, no association was observed between the presence of polyps and the patient's age, sex, weight, number of pregnancies or use of exogenous female hormones. Gallbladder polyps are often asymptomatic but can be associated with biliary pain. The clinical significance relates largely to their malignant potential.

The most common benign neoplastic lesion of the gallbladder is an adenoma, while the most common benign non-neoplastic lesions are cholesterol polyps (cholesterolosis). Cholesterolosis is characterized by the accumulation of lipids in the mucosa of the gallbladder wall. It is a benign condition that is usually incidentally diagnosed on ultrasonography. In some patients cholesterolosis can lead to symptoms and complications similar to gallstones.

Adenomatous polyps of the gallbladder are benign epithelial tumours composed of cells resembling biliary tract epithelium. The frequency at which adenomas progress to adenocarcinoma is unknown. The risk of malignancy of an adenoma is related to the size of the polyp. It is rare to see malignancy in a polyp less than 1 cm. Adenomyomatosis is an abnormality of the gallbladder characterized by overgrowth of the mucosa, thickening of the muscle wall and intramural diverticula. This condition does not involve any adenomatous changes in the gallbladder epithelium, thus it is not a premalignant condition.

The most useful predictive feature for malignancy is the size of the polyp. Polyps larger than 2 cm are almost always malignant. Polyps of 1 to 2 cm in size are possibly malignant. The only effective treatment for either of these situations is cholecystectomy. If a patient has gallbladder polyps and concomitant gallstones, a cholecystectomy is indicated. Cholecystectomy should also be recommended for patients who have biliary colic or pancreatitis in the setting of cholesterolosis. Patients with nonspecific dyspeptic symptoms should be managed conservatively and symptomatically. Lesions less than 1 cm in diameter usually represent cholesterol polyps and can be followed by ultrasound in six months, and then on a yearly basis. An increase in polyp size is an indication for cholecystectomy.

Answered by:
Dr. Jerry McGrath

MRSA and Avian Influenza, Is There a Connection?

9.

Is there a relationship between Methicillin-resistant *Staphylococcus aureus* (MRSA) and avian influenza?

Question submitted by:
Dr. Len Grbac
Etobicoke, Ontario

There is no direct relationship between these two pathogens. However, it has long been known that after an influenza infection, individuals are more susceptible to bacterial pneumonia, most often caused by Pneumococcus or *Staphylococcus aureus*. Indeed, it was these types of secondary bacterial infections that caused a lot of the extremely high morbidity and mortality associated with the 1918-19 influenza pandemic. *Staphylococcus aureus* pneumonia tends to be necrotizing and highly virulent. In recent years, this has been further complicated by the emergence of community-acquired Methicillin-resistant *Staphylococcus aureus* (MRSA). This has meant that we have started to see more community-acquired pneumonia, post-influenza or otherwise, caused by MRSA. Although still relatively rare, MRSA is not covered by the usual empiric regimens for community acquired pneumonia, and the consequent delay in providing adequate therapy for this highly aggressive organism has led to severe disease and death in some cases. Some strains of influenza may be more likely than others to cause post-viral pneumonia, but with the small numbers of human cases of avian influenza to date, it is hard to assess this issue.

Answered by:
Dr. Michael Libman

Vaccination for Family Members of Individual with Hepatitis C

10.

Should family members of someone with Hepatitis C be Hepatitis A/B vaccinated?

Question submitted by:
Dr. Anne Sorensen
Oshawa, Ontario

Patients with chronic liver disease (including hepatitis C) should be vaccinated as early as possible for hepatitis A and B. Response rates to HepB vaccine are low in patients with decompensated cirrhosis and/or liver transplantation. Given the low response rate for patients with decompensated liver disease, it is reasonable that household contacts of patients with hepatitis C be vaccinated for Hepatitis A and B.

Answered by:
Dr. Jerry McGrath

11. Significance of Spots on Nails

I sometimes see patients with spots on their nails. Are these significant?

Question submitted by:
Dr. Al-Beruni Buckridan
Toronto, Ontario

These are usually harmless effects associated with mild trauma to the nail matrix, exercise, nail biting *etc.* Termed "leukonychia," these spots grow out with the nail over time. There is some evidence that zinc deficiency is associated with the development of leukonychia as well, so if felt to be clinically relevant, this should be ruled out. A broad injury to the matrix *e.g.*, door slam injury, chemotherapy can result in a transverse line.

Answered by:
Dr. Scott Murray

Screening Tests for Panic Attacks

12. Are there screening tests for panic attacks?

Question submitted by:
Dr. Trevor Campbell
Calgary, Alberta

Unfortunately, there is no definitive test that will confirm the pressence of panic disorder. Rather, diagnosis is clinically-based, relying upon the physician's judgment of objective findings. The diagnostic criteria for panic disorder outlined in the Diagnostic and Statistical Manual of Mental Disorders, 4th Edition (DSM-IV) requires the presence of recurrent panic attacks with any of the following: worry about possible future attacks, development of phobic avoidance, worrying about implications of attacks or their consequences, concern of losing one's mind, or any other change in behaviour due to the attacks.[1,2]

While the DSM-IV is the gold standard for making a diagnosis of panic disorder through a structured interview, there are some validated questionnaires that may be employed to assess the likelihood of panic disorder in the absence of a psychiatrist. Such questionnaires also assist in narrowing the diagnostic options when the presenting symptoms are vague. It should be noted, however, that these screening tools should not be used in isolation, but rather should be combined with a structured interview prior to diagnosing panic disorder.[3]

The following tools and questionnaires can be used to screen for panic disorder:

Quick PsychoDiagnostics (QPD): This is a questionnaire that is designed to detect the following disorders based on the DSM-IV criteria: major depression, post-traumatic stress disorder, dysthymic disorder, alcohol/substance abuse, bipolar disorder, bulimia nervosa, generalized anxiety disorder, somatization panic disorder and obsessive compulsive disorder.[4] The QPD has the best evidence and utility in a primary care setting to screen for panic disorder, as it has an excellent positive likelihood ratio for panic disorder.[3]

The Mental Health Index-5 (MHI-5): The MHI-5 is a mental health symptom inventory that uses five items that best predict the summary score for the 38-item Mental Health Index. It specifically screens for panic disorder, by examining a single item from a much larger questionnaire used for panic disorder and depression. This screening tool has 100% sensitivity, but a poor positive likelihood ratio.[3]

The Panic Disorder Self-Report (PDSR): The PDSR is a self-report diagnostic measure of panic disorder based on the DSM-IV criteria. It has been shown to have 100% specificity and a good negative likelihood ratio. However, it is a very long questionnaire, which may limit its utility in a busy, clinical setting.[3]

The Panic Disorder Severity Scale: This is a seven-item instrument that is used to rate the overall severity of panic disorder. It has been found to be a simple, reliable instrument, particularly in primary care settings.[5]

Mobility Inventory (MI): The MI is a validated, 27-item instrument designed to measure agoraphobic avoidance behaviour and frequency of panic attacks. Twenty-six of the items measure avoidance. It provides clinically useful information both in total score as well as interpretation of scores

on individual items that can be used in individuals with suspected agoraphobic behaviour. [6]

The Body Sensations Questionnaire (BSQ): The BSQ is an 18-item instrument designed to measure body sensations associated with agoraphobia. This scale lacks items relating to several DSM-IV criteria for panic, thereby limiting its validity and reliability.[3]

In addition to such screening tools, a patient's 'panic diary' may also be useful for the individual and physician to better understand the nature and specifics of the disorder. All the data collected in combination with a thorough patient history and exam, as well as a structured patient interview, should enable the physician to rule out alternative causes and make an accurate diagnosis and help with root cause analysis. Approaching the patient with a multi-faceted approach will tactically target the ideal therapy.

References:
1. Roy-Byrne PP, Craske MG, Stein MB. Panic Disorder. Lancet 2006;368(9540):1023-32.
2. Katon WJ. Clinical Practice: Panic Disorder. N Engl J Med 2006;354(22):2360-7.
3. Hallgren JD, Morton JR, Neher JO. Clinical Inquiries: What's the Best Way to Screen for Anxiety and Panic Disorders? J Fam Pract 2007;56(7):579-80.
4. Austin D, Blashki G, Barton D, Klein B. Managing Panic Disorder in General Practice. Aust Fam Physician 2005;34(7):563-71.
5. Shear MK, Rucci P, Williams J, et al., Grochocinski V, Vander Bilt J, Houch P, Wang T. Reliability and Validity of the Panic Disorder Severity Scale: Replication and Extension. J Pscyh Res 2001;35(5):293-6.
6. Fischer J, Corcoran K. Measures for Clinical Practice and Research: A Sourcebook: Volume 1. Oxford: Oxford Free Press, 2007.
7. Austin DW, Richards JC, Klein B. Modification of the Body Sensations Interpretation Questionnaire (BSIQ-M): Validity and Reliability. J Anxiety Disorder2006;20(2):237-51.

Answered by:
Professor Joel Lamoure
Contributor:
Jessica Stovel

Reasons for Elevated D-Dimer

13.

Besides pulmonary embolism what are other reasons for elevated D-Dimer?

Question submitted by:
Dr. Y Thobani
Mississauga, Ontario

The D-dimer test is useful in ruling out the presence of venous thromboembolism (VTE) when it is negative, but a positive test is not specific enough to make a definitive diagnosis of VTE.

Elevated D-dimer levels are commonly present in hospitalized patients. Conditions associated with increased plasma levels of D-dimer include:

- Arterial thromboembolic disease (*e.g.,* myocardial infarction, stroke, acute limb ischaemia, atrial fibrillation, intracardiac thrombus).
- Disseminated intravascular coagulation (DIC)
- Pre-eclampsia and eclampsia
- Use of thrombolytic agents
- Congestive heart failure
- Severe sepsis/inflammation
- Surgical procedures
- Systemic inflammatory response syndrome (SIRS)
- Severe liver disease (decreased clearance)
- Malignancy
- Renal failure
- Normal pregnancy (second and third trimester)

Answered by:
Dr. Chi-Ming Chow

Possible Side Effects of Using Cosmetic Botox ®

14.

Can the use of cosmetic Botox ® be harmful? What are the known risks?

Question submitted by:
Dr. Nina Georgadis
Hamilton, Ontario

The common side effects of Botox ® cosmetic include inadvertent neuromuscular effects, often induced by paralysis of muscles not meant to be targeted (*e.g.* forehead and eyelid drooping). This is often related to the experience and technique of the injector. Other injection related effects include redness, pain, swelling, numbness, bruising, muscle weakness and bleeding. Normally, these symptoms subside within a week after injection. Some patients have experienced nausea, flu syndrome, respiratory infection and headache. Health Canada is informing Canadians and Canadian health care professionals that the labeling information of BOTOX ® and BOTOX Cosmetic ® will now include the risk of the toxin spreading to other distant parts of the body. Possible symptoms of "distant toxin spread," which can be fatal, include muscle weakness, swallowing difficulties, pneumonia, speech disorders and breathing problems.

Answered by:
Dr. Scott Murray

Psoriasis After Age 40

15. Can psoriasis ever present for the first time after age 40?

Question submitted by
Dr. Steve Choi
Oakville, Ontario

It is not uncommon for psoriasis to present for the first time in the 50 to 60 age group. This group tends to have less documented clear-cut genetic patterns than their patients with earlier onset. As well, this late onset psoriasis does not tend to become as generalized as often as seen in earlier onset cases.

Answered by:
Dr. Scott Murray

Spinal Stenosis Patient Referral To Neuro Surgeon

16.

When should we refer a patient with spinal stenosis to a neuro surgeon?

Question submitted by:
Dr. Jacques Beland
Fredericton, Newbrunswick

Spinal stenosis is a complex, common medical problem. The diagnosis is entertained in patients who have chronic back pain associated with pain in the legs, especially upon exertion, and improvement when the patient rests. Examination often shows focal deficits relating to entrapment of nerve roots. For the most part treatment is aimed at pain control and maintaining good muscle strength with regular exercises. Surgical opinion may be required in patients who develop focal neurological symptoms, especially urinary or bowel incontinence or retention, or weakness in a leg (in a nerve distribution). These symptoms may suggest encroachment on the nerves and constitute a medical emergency; as it may result in permanent damage to the nerves if it is not corrected urgently. Decisions regarding the need for surgery are best left to the orthopedic or neurosurgeon.

Answered by:
Dr. Ashfaq Shuaib

Reason for Using ß Blockers in Heart Failure

17.

Using ß blockers in heart failure: what are the reasons to choose carvedilol, bisoprolol, or metoprolol?

Question submitted by:
Dr. Majd Tahan
Valleyfield, Québec

Symptomatic heart failure leads to activation of the sympathetic nervous system with an elevated plasma norepinephrine concentration, which has deleterious effects. A number of trials with several ß blockers (metoprolol, carvedilol, and bisoprolol) have demonstrated that beta adrenergic blockade leads to symptomatic improvement and mortality reduction.

The Carvedilol, or Metoprolol European Trial (COMET) directly compared the effects of carvedilol and metoprolol, which suggested that carvedilol is more effective than metoprolol in reducing mortality and vascular events. However, there is a limitation to the study in which the degree of ß blockade may be greater in the carvedilol branch of ß blockers. In general patients with low blood pressure may be less likely to tolerate carvediol due to its vasodilator effect.

Reference
1. Poole-Wilson PA, Swedberg K, Cleland, JG, et al. Comparison of Carvedilol and Metoprolol on Clinical Outcomes in Patients with Chronic Heart Failure in the Carvedilol Or Metoprolol European Trial (COMET): Randomised Controlled Trial. Lancet 2003;362:7.

Answered by:
Dr. Chi-Ming Chow

IUD and Bacterial Vaginosis

18.

Does an IUD increase the occurrence of bacterial vaginosis (BV)?

Question submitted by:
Dr. Shirley Epstein
Toronto, Ontario

Under normal circumstances, the vagina harbours a balance of bacteria, comprised mostly of lactobacilli and a lesser proportion of anaerobes. When the acid pH of the vagina is disturbed and becomes more alkaline, there can be an overgrowth of anaerobes resulting in unpleasant discharge and odour in some women and no symptoms in others. Risk factors for BV include multiple or new sexual partners, douching and cigarette smoking. The use of an IUD for contraception does not appear to be a risk factor for BV, although this association is controversial. The association of BV in a female with an IUD may be due to the sexual activity of the female and not the presence of the IUD itself.

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Answered by:
Dr. Cathy Popadiuk