Consultant's Corner

Practical Answers To Your Everyday Questions

1. Focal Nodular Hyperplasia in Segment VII of the Liver

What do we do if we perform an MRI scan and find a focal nodular hyperplasia located in segment VII of the liver?

Question submitted by:
Dr. Claude Roberge
Sherbrooke, Québec

Focal nodular hyperplasia (FNH) is the most common, non-malignant hepatic tumour that is not of vascular origin. FNH is seen in men and women, but it is predominantly found in women (in a ratio of 8:1). Lesions generally do not change over time, and, on occasion, they actually become smaller. Patients who are suspected of having FNH should be managed conservatively. If the diagnosis is unclear, a liver biopsy may be helpful. Follow-up diagnostic imaging studies (MR, CT, ultrasound) will often be sufficient to confirm the stability of the lesion. The magnitude of the risk associated with oral contraceptives and FNH is uncertain.

FNH was first described long before oral contraceptives. It was seen in men and children, and its incidence has remained steady after the introduction of oral contraceptives. However, FNH may be responsive to estrogen. Women taking oral contraceptive pills tend to have larger, more vascular tumours, more symptoms, and reports of hemorrhage or rupture. If a women stays on OCPs or estrogen, a follow-up imaging study should be obtained in six months. Surgery should be reserved for the rare symptomatic lesion or a highly suspicious lesion.

Answered by:
Dr. Jerry McGrath

2. Skin Pain in a Patient with Scleroderma

Is there something that can be done to improve skin pain in a patient with scleroderma (topical treatments)?

Question submitted by:
Dr. Sophie Bernier
Roberval, Québec

Scleroderma can affect the skin by causing a scar-like hardening, discolouration or bound down limitation of joint movement. In terms of topical therapy, the most effective modality is PUVA (psoralens and ultraviolet A). There is some evidence of benefit with calcipotriene (Vitamin D derivative) and topical steroids, calcineurin inhibitors, and imiquimod. Physiotherapy is very important in order to avoid any possible joint limitation.

Answered by:
Dr. Scott Murray

What Constitutes Lifelong Depression?

3. In a patient with greater than three episodes of depression, should that patient be on lifelong treatment?

Question submitted by:
Dr. Len Grbac
Etobicoke, Ontario

The decision to continue treatment for depression in a patient who has experienced more than three episodes is complex. Unfortunately, recurrence and chronic development of depressive episodes is generally the rule rather than the exception.[1] We now know that there are neurobiological changes that occur after multiple episodes of depression which, in part, enhance the risk of treatment resistant depression. Consequently, it is generally recommended that, after the third episode (or in some cases, even the second), continued prophylactic therapy should be considered.[2] However, the length of prophylaxis needs to be considered on a case-by-case basis, because there are a number of specific factors that may place a patient at increased risk for experiencing future episodes.[1]

One of the strongest indicators that a patient may experience recurrent episodes of depression is the presence of residual symptoms (*e.g.*, sleep disturbances, fatigue, diminished interest, *etc.*), because these symptoms mean that the patient continues to have an active illness.[1] Specifically, the results of one study by Paykel *et al*. found that, compared with fully remitted patients, those who experienced residual symptoms after remission had significantly higher relapse rates and may benefit from continued treatment.[3]

Findings from the Sequneced Treatment Alternatives to Relieve Depression (STAR*D) study also found that relapse was more likely in patients who required more adjustment of medications in order to achieve remission than those who remitted with the first agent used.[4] Consequently, a patient's history of response to medical interventions may be an additional predictor for a patient's likelihood to relapse and experience a future episode of depression.

There are several other factors which may place a patient at increased risk for a future depressive episode. First, patients with previous depressive and chronic episodes (*i.e.*, an episode lasting two years or more) are also strong predictors, of the need for continuation of treatment over the long-term.[1] Second, severity of baseline depression and the presence of melancholic features (*e.g.*, hypo, plus hyperarousal, loss of appetite with weight loss, poor mood in the morning, *etc.*) are predictors because these features may make the patient more sensitive to minor stressors.[1] Finally, the existence of other comorbid disorders (*e.g.*, personality disorders, substance use, anxiety disorders, *etc.*) has also been demonstrated to increase the risk of relapse in depressed patients.[1]

In addition to identifying such predictors, clinicians should also frequently reassess the patient's changing needs over time (*e.g.*, the presence of symptoms of depression or the development of any negative events in the patient's life) in order to ensure that the individual continues to maintain remission and functionality from depression.[1]

In summary, the anticipation and identification of relapse predictors provides a proactive approach to effective management of depression over the long-term.[1] The optimal prophylactic dose for such patients has not been clearly defined in the literature, but it is generally recommended that the patient remain on the drug and dose that provided the initial optimizing response.[2] However, while continued and sometimes lifelong therapy is initiated in patients with greater than three episodes of depression, it is important to also recognize that psychotherapy (especially cognitive behavioural therapy and behavioural activation therapy) may prevent relapse more than pharmacotherapy.[1]

References:
1. Shelton RC: Long-term Management of Depression: Tips for Adjusting the Treatment Plan as the Patient's Needs Change. J Clin Psychiatry 2009;70 (Suppl 6):32-7.
2. Spigset O, Martensson B: Fortnightly Review: Drug Treatment of Depression. BMJ. 1999 May 1;318(7192):1188–91.
3. Paykel ES, Ramana R, Cooper Z, *et al:* Residual Symptoms After Partial Remission: An Important Outcome in Depression. Pscyhol Med. 1995;25(6):1171–80.
4. Rush AJ, Trivedi MH, Wisniewski SR, *et al*. Acute and Longer-term Outcomes in Depressed Outpatients Requiring One or Several Treatment Steps: a STAR*D Report. Am J Psychiatry. 2006;163(11):1905–17.

Answered by:
Professor Joel Lamoure
Contributor:
Professor Jessica Stovel

Thalassemia and Iron Deficiency

4.

If a patient with thalassemia has an iron deficiency, is it safe to supplement with iron therapy? How do you monitor iron therapy?

Question submitted by:
Dr. Roshan Dheda, Bradford, Ontario

Assuming that the patient in question has thalassemia minor (heterozygous), there is no contraindication to iron replacement therapy. Instituting iron replacement should not be delayed. In a stable, asymptomatic patient, I would reinforce the need for compliance with the patient, and check the CBC and serum ferritin after six months of replacement. If the ferritin is in the normal range, the hemoglobin and MCV would serve as the new baseline values in the iron-repleted patient. If the patient were to have blood tests done for any reason soon after starting replacement, I would expect that the reticulocyte count should be up within one to two weeks, and the hemoglobin should be well on its way up in two to three weeks. As in any iron-depleted patient, normalization of the ferritin level will lag behind the hematological response.

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

What Causes Microscopic Colitis?

5.

What causes microscopic colitis? How is it treated?

Question submitted by:
Dr. David Ross
Moncton, New Brunswick

Microscopic colitis is characterized by chronic watery diarrhea without bleeding. The colon appears normal by colonoscopy and the diagnosis is established by biopsy. The biopsy reveals colitis but no mucosal ulcerations. Two different types of microscopic colitis exist:

- Lymphocytic colitis: characterized by an increased number of lymphocytes
- Collagenous colitis: characterized by thickening of the collagen plate

Therapy should consist of stopping nonsteroidal anti-inflammatory drugs (NSAIDs) and other drugs that have been associated with this condition such as simvastatin, lansoprazole, omeprazole, esomeprazole, ticlopidine, flutamide, gold salts, and sertraline.

Some patients diagnosed with lymphocytic colitis have celiac disease, and they should be tested for this condition. If they have celiac disease, they should initially be placed on a gluten-free diet.

Bismuth subsalicylate (525 mg t.i.d.) has been shown to decrease fecal frequency, improve consistency, and improve colonic histology. Some patients have persistent symptoms despite this and require treatment with mesalamine, sulfasalazine, prednisone or budesonide. Loperamide or cholestyramine can also be added for symptomatic relief.

Answered by:
Dr. Jerry McGrath

Dosage of ASA for Patient with Chest Pain Prior to Entering ER

6.

What dose of ASA should be used when a patient presents with new onset of chest pain prior to sending the patient to the ER?

Question submitted by:
Dr. D. Hawkins
Kelowna, British Columbia

An initial dose of 160 to 325 mg of uncoated aspirin should be given as soon as possible to patients thought to be suffering from acute coronary syndrome (ACS), *i.e.,* angina or myocardial infarction. The aspirin tablet(s) should be chewed or crushed. At the dose given, aspirin will produce a rapid antithrombotic effect, due to immediate and almost complete inhibition of thromboxane A2 (TxA2) production.

Answered by:
Dr. Chi-Ming Chow

7. TSH Test for Hypothyroidism

A patient developed hypothyroidism after being treated with I131 for Graves disease. The TSH continues to rise even though thyroxine has been started. T4 has also risen to normal levels.

Question
submitted by:
Dr. Valerie Guilbault
Gatineau, Québec

TSH is generally the best test to follow when treating patients with hypothyroidism. An elevated TSH level, even in the presence of normal T4 levels suggests inadequately treated hpothyroidism, and an increase in the dose of thyroxine is usually indicated.

Answered by:
Dr. Hasnain Khandwala

Pregnancy After MMR Injection

8.

If a woman gets pregnant immediately after an MMR injection, what advice would you give?

Question submitted by:
Dr. Michael Marjos
Jordan, Ontario

Pregnant women are advised not to receive the measles, mumps, and rubella (MMR) vaccine as a safety precaution, because it contains a live virus, and there is a theoretical risk of congenital rubella syndrome (CRS) to the fetus. CRS is characterized by sensorineural deafness, eye abnormalities, and congenital heart disease. It also affects from 25 to 50% of infants born to mothers who contract rubella in the first 20 weeks of pregnancy. Nonetheless, collated data of women vaccinated in pregnancy that have gone on to term, show very little risk, less than 1% of (CRS). If a woman does find she is pregnant immediately after an MMR injection, she should be counseled that there is a theoretical risk of CRS, but, in actual terms, the risk is very small. It should be noted that termination of pregnancy, as a standard, is not the immediate option.

Answered by:
Dr. Cathy Popadiuk

Six-month-old Breastfed Baby with Blood in Her Stool

9.

How should we investigate a six-month-old breastfed baby with blood in her stool for the past month?

Question submitted by:
Dr. Anne Monty,
Montréal, Québec

This is an excellent question and to some extent it depends on the nature of the blood in the stool and also on how the baby is doing. The fact that this has happened for a month suggests that the cause is not acute or severe. In an otherwise healthy and thriving baby with some streaks of dark blood in the stool, the first step should be to examine the mother's breasts to determine if a cracked nipple might result in the baby swallowing maternal blood. In the case of bright red blood, this suggests an origin somewhat more distal in the gastrointestinal tract. In this case, the first step is to carefully examine the baby's anus for a fissure or other local lesion. In this case, the blood is typically on the outside of the stool and is often present in streaks. Flecks of bright red blood may indicate a protein intolerance; although, this is much less common in a breastfed baby than in a baby receiving formula.

Answered by:
Dr. Michael Rieder

Sun Exposure in a Patient with Psoriasis

10.

Psoriasis patient is told to get sun exposure as he pleases. Is he more likely to have BCC or melanoma one day?

Question submitted by:
Dr. Andre Louis Kiss
Varennes, Québec

Psoriasis patients do indeed risk adverse effects, such as increased skin cancer from ultraviolet light exposure. The advice to "get some sun" should always be tempered with recognition of this risk. Therefore, ultraviolet light exposure needs to be monitored carefully, and skin surveillance should be carried out for any patient that has significant ultraviolet light exposure. For instance, dermatologists carefully maintain a record of each patient's UVA exposure when in PUVA therapy, setting the allowable maximum acceptable lifetime exposures. Psoriasis certainly can benefit from a bit of recreational sun, but instead of excessive light exposure, further medical management should be considered.

Answered by:
Dr. Scott Murray

Accuracy of Rapid Strep Tests in Children

11.

How accurate and useful are rapid strep tests in children?

Question submitted by:
Dr. R. Tennenhouse,
Thornhill, Ontario

Rapid strep tests have been used for some time, but they have been viewed as being somewhat controversial. The main issue with rapid strep tests –which rely on detecting antigens unique to Group A Streptococcus– is their sensitivity. This is a problem that applies to both adults and children. The tests have excellent specificity, which means that a positive test is meaningful, in that there is approximately a 95% chance that the patient does in fact have strep, and thus, therapy would be indicated. On the other hand, if the test is negative, then the issue of specificity raises its head. Most experts would assess rapid strep tests as having specificity in the range of 75 to 85%, which translates into a 15 to 25% chance of a false negative. Therefore, while a positive rapid strep test means the patient should be treated, a negative strep test is in fact not necessarily reassuring, as there is still a reasonable chance that the patient has a strep infection.

Answered by:
Dr. Michael Rieder

Fertility and the Effect of Chemo and Radiotherapy to Treat ALL

12. What are the complications of chemo and radiotherapy on the fertility of a woman who had acute lymphoblastic leukemia during childhood?

Question submitted by:
Dr. Narmin Ibrahim,
Saskatoon, Saskatchewan

Given the intensity and types of chemotherapy used to treat acute lymphoblastic leukemia (ALL) in childhood, including stem cell transplant, men and women are rendered infertile after treatment. As such, young men in their adolescence are now offered sperm banking if time permits and, in women, new experimental treatments are being investigated to save ovarian tissue that can be implanted elsewhere after treatment, as well as possible oocyte cryopreservation. In general, the more chemotherapy received, the lower the likelihood of future fertility. Radiation to the gonads of 1,500 cGy will also render the patient irreversibly infertile. In the past, less aggressive sub types of ALL could be cured with simpler regimens of chemotherapy and occasionally spared a rare individual from infertility. As treatments have become increasingly complex to cure more aggressive types of ALL, infertility has become more likely and is essentially 100% after a stem cell transplant.

Answered by:
Dr. Cathy Popadiuk

Hepatitis A and B Immunization

13. A patient had the intial two injections (*e.g.*, first and second 30 days later), but no booster at six months. Three years later, the patient wishes to have long-term protection. Do I give one injection followed by another injection in six months?

Question submitted by:
Wayne Sullivan
Halifax, Nova Scotia

As a general rule, when vaccine doses are missed, the strategy should be to continue with the next dose and continue on with the regular schedule from that point. Obviously, we do not have extensive data on dosing schedules where vaccines are given months or years late. However, in the case of vaccination against Hepatitis A, Hepatitis B, or both, there are several publications looking at antibody titres in significant numbers of people who have missed doses and made them up later. In many cases, the final booster was given as much as five years late. There is no evidence that the final antibody titres are worse than in the population receiving all doses on schedule. In fact, there is a bit of data suggesting even better seroconversion after delayed doses. The only problem in these cases is that these people are not completely protected until the final doses are given. In any given case, if the patient is at high risk for infection, additional confidence may be gained by performing serology on the recipient a few weeks after the final dose to verify the presence of antibodies. Seropositivity appears to correlate well with lifelong protection.

Answered by:
Dr. Michael Libman

Treatment for Constipation in Infants

14.

What are the best treatments for constipation in infants?

Question submitted by:
Dr. Alnoor Keshavjee
Scarborough, Ontario

Constipation in infants is a common problem and one that can be readily treated. The first step is prevention, through education. There needs to be adequate fluid intake, as a major factor in the formation of hard stools is a relatively inadequate fluid intake. Parents must also be advised that, when solid foods are started, fibre is important in preventing the development of constipation. As well, when constipation develops, especially in very young infants, it is important to assess the rectum and anus to ensure that there is not a congenital problem, such as Hirschsprung's Disease or an acquired problem such as an anal fissure. The first line of therapy can include the use of sorbitol-containing fruit juices (apple, prune, or pear). If the use of juice is not associated with two to three soft stools per day (in a bottle fed baby), then it may be worthwhile to consider the use of a stool softener. Stimulant laxatives, such as senna products, do not address the fundamental pathophysiology. Mineral oil products have been used, but are often suboptimally palatable. The use of suppositories has not been recommended for infants with routine acute constipation. Over the past several years, it has been noted that the use of the dry powder version of polyethylene glycol 3,350 (used in liquid form for colonoscopy preps) is a useful approach to acute constipation in infants, if dietary approaches have not been useful. Polyethylene glycol 3,350 can be added to formula or juice 5 to 10 g once or twice a day until the stool target is reached, after which the parents can gradually back off on the amount over the next week or so. These products are now available over the counter in Canada. Parents of young infants should be advised that their infant should be seen by their primary care provider before using pharmacotherapy for constipation.

Answered by:
Dr. Michael Rieder

Treating Gestational Diabetes Mellitus

15.

Does treating gestational diabetes mellitus (GDM) through diet reduce complications?

Question submitted by:
Dr. Michael Silver
Scarborough, Ontario

Treatment of gestational diabetes mellitus (GDM) by keeping blood sugar values as normal as possible does reduce complications to the fetus and mother. Initially, conservative management with diet control and activity is attempted. If blood sugar values stay euglycemic, this management strategy can be continued with close glucose monitoring. If diet control and activity does not keep maternal blood glucose levels at an acceptable range, then insulin is added to the regimen. Keeping maternal blood glucose levels euglycemic has been shown to reduce peri-natal mortality, fetal macrosomia, cesarean section rate, brachial plexus injury, immediate neonatal metabolic complications and the risk of pre-eclampsia in the mother.

Answered by:
Dr. Cathy Popadiuk

Treatment for “Airplane Ear”

16.

How can you treat "airplane ear" that does not respond to sudafed?

Question submitted by:
Dr. R. E. Fredrickson
Halifax, Nova Scotia

The condition is usually due to Eustachian tube dysfunction. The physiologic functions of the Eustachian are as follows:

- Ventilation or pressure regulation of the middle ear
- Protection of the middle ear from nasopharyngeal secretions and sound pressures
- Clearance or drainage of middle ear secretions into the nasopharynx

The patient is advised to use steroid and anti-histamine nasal spray before flying. Popping of the ears is also suggested. This is done by pinching the nose and blowing gently. Popping the ears in this manner, especially after the use of nasal spray helps to squeeze some of the medication into the eustachian tube. For young children who have trouble popping their ears, there are some devices that can be purchased over-the-counter (Otovent balloon) that are quite useful. During flight descent, chewing gum may also be helpful for mild cases.

Occasionally, systemic steroids are prescribed. The placement of a tympanostomy tube (pressure equalizing tube) in the eardrum is rarely required to resolve the symptoms. If a patient has allergies or sinusitis, these need to be addressed before flying.

One should be aware of other causes of ear fullness. They include sensorineural hearing loss, serous otitis media, Ménière disease, tympanic membrane perforation, Temporo-mandibular Joint (TMJ) problems, *etc*.

Answered by:
Dr. Ted Tewfik

Recurrent Malaria

17. A missionary who is returning after duty in the Congo where she was treated recurrently for malaria, is now asymptomatic. Should she have a thick smear, and how cured are people that have been treated for malaria? Are they having recurrences or new infections?

Question submitted by:
Dr. Richard Martinez
Saint-Laurent, Québec

There are several questions here. Many diagnoses of malaria in sub-Saharan Africa are highly dubious, as properly trained technologists and functional microscopes are sorely lacking in most areas. In more remote areas, inappropriate or insufficient treatment is common, and counterfeited medications abound. Thus, any history of diagnosed malaria or treatment should not be accepted without question. If she has really had multiple and regular infections, she may well be semi-immune, and may have a low level parasitemia with few symptoms. However, the yield of a thick smear in the total absence of signs, symptoms, or consistent basic lab tests is low, and I generally would not routinely order a malaria test under these circumstances. Since malaria in this part of the world is mostly P. falciparum, which does not recur after proper treatment, she would not usually have any relapse of previously treated malaria. However, she could have a recrudescence of symptoms from a chronic low level parasitemia, which can persist for months or longer. These mildly symptomatic episodes should be diagnosed and treated. If she has not had regular malaria infections in the past, then she is unlikely to have any significant immunity. In this case, parasitemia in the absence of fever would be highly unusual. Finally, I would emphasize the importance of actually using a thermometer. Many patients are quite convinced of their own acumen in diagnosing fever, but my experience is that they are misleading themselves.

Answered by:
Dr. Michael Libman

Diabetes and Major Depressive Disorder

18. Is it a known fact that there is an association between diabetes and major depressive disorder. If so, should we be screening our long-standing diabetes patients for depression? If found, what are the treatment choices?

Question submitted by:
Dr. Paul Stephan
Scarborough, Ontario

This question may be answered from two facets. Indeed there is a link between depression and diabetes, although, the odds ratio and frequency/causality has not been stratified to the same degree as bipolar and schizophrenia. Suffice to say that people with diabetes do suffer from depression at a higher frequency than non-diabetics.

When your diabetic patient has signs and symptoms of depression, first steps include ensuring there are no marked fluctuations in blood sugar secondary to medications (*eg*: sulfonylureas) that may mimic depression or checking to see whether a new medication has been started that presents with psychiatric/depressive adverse effects. Two other common areas where depression may be mimicked include ruling out substance use disorders and thyroid aberrations.

Assuming the patient is truly depressed, and their depression is not iatrogenic or comorbid to other physical conditions, then there is, in our experience, a multi-modal approach. The steps are:

1) Lifestyle modifications (diet, alcohol restrictions or modifications, *etc.*)
2) Psychotherapy (cognitive or dialectical behavioural therapy, root cause analysis)
3) Medications

To address option three in isolation, there are serotonin selective reuptake inhibitors (SSRI), serotonin-norepinephrine reuptake inhibitors (SNRI), and norepinephrine-dopamine reuptake inhibitors (NDRI) available. These classes have a fair bit of weight variability within the agents, with the exception of bupropion, which is relatively weight-negative. We have left off mirtazapine as it has been noted that weight gain occurs in up to 30% of patients. In choosing one of these agents, the patient's other Axis 2 and Axis 3 conditions must be considered and weight neutrality optimized. We would avoid atypical antipsychotics given their association with changes in weight. Options, although not yet indicated, would be aripiprazole or ziprasidone. These agents should be reserved for augmenting only at this point.

In conclusion, judicious use of all three steps in a multi-modal, collaborative approach could, and should, be employed to help a patient with concurrent depression and diabetes.

Resources:
1) American Diabetes Association. Living with Depression and Diabetes. www.diabetes.org/living-with-diabetes/complications/mental-health/depression.html (Accessed January 17, 2011).
2) Lamoure J, Stovel J, Piamonte M *et al*: Introduction of a New Paradigm in Patient Care: The Collaborative Patient/Person-Centric Care Model (CPCCM). Canadian Healthcare Network. Spring 2011 (In review).

Answered by:
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