Consultant's Corner

Practical Answers To Your Everyday Questions

1. The colour of nasal discharge

Is there any correlation of sputum or nasal discharge colour to an infectious agent? Patients love to tell me that they have green/yellow mucous secretions, yet I am totally at a loss to its significance, if any.

Question submitted by:
Dr. K. Abel
Leduc, Alberta

When there is allergic rhinitis, or chronic sinusitis, production of extra mucus occurs. To try and clear the irritant or infection away, the nasal and/or the sinus cilia become damaged as they attempt to move this mucus away, thereby impairing the mucociliary flow. This means that extra mucus cannot be cleared and clogs up in the nose and in the nasal cavities. The mucus may become viscid and tenacious. The discharge is usually yellow, but it may be green, profuse and stringy from the posterior nares and reaches the nasopharynx and oral cavity. It is important to correlate these symptoms with the clinical picture. Culture of the discharge, plain X-ray and/or CT scan may be useful before therapy is instituted.

Answered by:
Dr. Ted Tewfik

2. *H. pylori* screening

Is *Helicobacter pylori* screening recommended for the general population?

Question submitted by:
Dr. Aloke DE,
Westville, Nova Scotia

Although the prevalence of *Helicobacter pylori* (*H. pylori*) is decreasing in the Western world, it is still fairly common, especially in older individuals. In some areas, such as the Far East, infection is the norm.

H. pylori is a risk for peptic ulcer disease (PUD), gastric cancer and gastric mucosa associated lymphoid tissue lymphoma. However, the vast majority of infected patients never experience problems. Therefore, population screening for *H. pylori* is not recommended. Testing should be restricted to patients with known PUD, or to patients with symptoms that might indicate PUD. There may be benefit in treating patients with functional dyspepsia who are infected. The value of testing patients with a family history of gastric cancer is unclear.

Answered by:
Dr. Mark Borgaonkar

3. What is the best malaria drug?

What is the best drug for travellers going to areas with malaria? Why is this recommended?

Question submitted by:
Dr. Rosemarie Schwartz, Oakville, Ontario

There is no single best drug for malaria prophylaxis. In general, it is best to refer these travellers to clinics that are familiar with the evolving distribution of various types of malaria. My own preference is to use clinics in academic centres which are also able to provide post-travel care and on-site diagnostic testing for tropical diseases. Chloroquine remains the drug of choice for the few areas of the world without chloroquine resistance. In other areas, drugs such as atovaquone/proguanil, mefloquine and doxycycline are often used. The choice is based on:

- the side-effect profile,
- the cost,
- the convenience and
- the efficacy in a given region.

Answered by:
Dr. Michael Libman

4. Risk profiles of celecoxib and rofecoxib

In terms of risk profiles, is celecoxib safer than rofecoxib in elderly patients with premorbid cardiac conditions?

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

There is no direct clinical trial comparing the cardiovascular (CV) risks between rofecoxib and celecoxib. A retrospective population-based study among Quebec elderly patients published in 2005 showed that rofecoxib was associated with an increased risk (rate ratio 1.24 [95% CI 1.05 to 1.46]) for an acute myocardial infarction (AMI). No similar increase in CV risk was observed with celecoxib (rate ratio 0.99 [95% CI, 0.85 to 1.16]).[1] However, this observational study could not account for all the potential confounders, including over-the-counter use of acetylsalicylic acid and ibuprofen.

Rofecoxib was voluntarily removed from the market by Merck Frosst Canada Ltd., in September 2004. The US Food and Drug Administration has decided to allow celecoxib to remain and has asked Pfizer Canada Inc. to include a boxed warning about CV and gastrointestinal risks. However, physicians are encouraged to use the lowest effective dose for the shortest duration tailored to individual patient treatment goals.[2]

Answered by:
Dr. Chi-Ming Chow

References

1. Lévesque LE, Brophy JM, Zhang B: The risk of myocardial infarction with cyclooxygenase-2 inhibitors: A population study of elderly adults. Ann Intern Med 2005; 142(7):481-9.
2. FDA regulatory actions for the COX-2 selective and non-selective non-steroidal anti-inflammatory drugs (NSAIDs):http://www.fda.gov/cder/drug/infopage/COX2/COX2qa.htm (Accessed May 15 2006).

5. Decreasing the size of thyroid nodules

What is the role of thyroid suppression (with synthroid) for a multinodular goitre?

Question submitted by:
Dr. Louise Linney
Ottawa, Ontario

Suppressive therapy with exogenous levothyroxine has been demonstrated to prevent growth of and/or decrease the size of thyroid nodules. However, a significant number of thyroid nodules remain stable over time without suppressive therapy. The risks of aggressive suppressive therapy includes inducing a state of iatrogenic thyrotoxicosis, which is associated with an increased risk of atrial fibrillation and osteoporosis. Thus, the benefits of decreasing the growth of benign thyroid nodules needs to be weighed against the risks of such therapy. In general, I avoid suppressive treatment in the elderly, or if the thyroid-stimulating hormone (TSH) is low-normal to begin with. In patients with high-normal or frankly elevated TSH levels, suppressive therapy to aim for a low-normal TSH is appropriate.

Answered by:
Dr. Hasnain Khandwala

6. Diagnosing CAN

How do you diagnose cardiovascular autonomic neuropathy?

Question submitted by:
Dr. Clayton Reynolds
Victoria, British Columbia

Diabetic autonomic neuropathy affects many different organ systems, including the cardiovascular system. Cardiovascular autonomic neuropathy (CAN) can manifest as:

- exercise intolerance,
- postural hypotension (orthostatic drop in systolic
- BP > 20 mmHg),
- persistent sinus tachycardia,
- nocturnal arrhythmogenesis,
- fixed heart rate (between 80 and 90 beats per minute),
- painless myocardial infarction and
- sudden death.

Reflex cardiovascular testing includes tests of predominantly parasympathetic integrity (heart rate variability to deep breathing) and tests of predominantly sympathetic integrity (postural systolic BP fall and heart rate variability to deep breathing). The results have to be referenced to age-matched normal subjects.[1] Direct assessment of cardiac sympathetic integrity can be done by scintigraphic imaging using radiolabeled analogues of norepinephrine (*e.g.,* norepinephrine). This test is more sensitive but more expensive and not widely available.

Answered by:
Dr. Chi-Ming Chow

Reference
1. Ziegler D, Laux G, Danneht K, et al: Assessment of cardiovascular autonomic function: Age-related normal ranges and reproducibility of spectral analysis, vector analysis and standard tests of heart rate variation and blood pressure responses. Diabet Med 1992; 9(2):166-75.

7. Breast milk allergy

Is there a true allergy or incompatibility for infants to breast milk?

Question submitted by:
Dr. Ulrike Meyer
Pouce Coupe, British Columbia

In the same way that drugs may be secreted into breast milk of lactating women, a number of food allergens have also been detected at relatively high concentrations in breast milk. These food allergens include:

- ß-lactoglobulin from cow's milk,
- ovalbumin and ovomucoid from hen's egg,
- gliadin from wheat and
- two major allergens from peanut (Ara h1 and Ara h2).

Typically, these allergens make their way into breast milk within a few hours of ingestion by the lactating mother. There are numerous reports in literature describing eczematous reactions, immediate hypersensitivity reactions and even food protein-induced enterocolitis in breast-feeding infants. These infants respond favourably to maternal elimination diets (*i.e.,* removal of the offending food from the maternal diet). Re-introduction of the food in question in the maternal diet has led to a recurrence of the food-induced disease in the infant. Breast milk acts as a vehicle of exposure to these food allergens. In spite of these findings, breast feeding is still considered the ideal form of infant nutrition.

Answered by:
Dr. Peter Vadas

8. The role of infliximab for UC

What is the role of infliximab therapy for ulcerative colitis?

Question submitted by:
Dr. Craig Render,
Kelowna, British Columbia

Although the first studies of infliximab for ulcerative colitis (UC) were disappointing, two recent studies have shown a significant benefit.

Active ulcerative colitis (ACT) 1 and ACT 2 were randomized controlled trials of infliximab for moderate to severe UC. Both demonstrated an increased rate of clinical response and remission in patients followed for 30 weeks and 54 weeks. Some patients in these studies were on steroids, immunosuppressives (azathioprine or 6-mercaptopurine), or were steroid refractory.

It is unclear how best to integrate these findings into the management strategy for UC. At the very least, these studies have shown that infliximab is an option for UC patients failing other medical therapies that should be considered before proceeding to curative proctocolectomy.

Answered by:
Dr. Mark Borgaonkar

9. What is the relationship between food and eczema?

What is the relationship between food and eczema?

Question submitted by:
Dr. Joseph Lam,
Toronto, Ontario

Food allergies are often part of the atopic diathesis. Therefore, it is not uncommon to see food allergies in your atopic dermatitis patient (as well as hayfever and asthma). However, it is relatively uncommon to see a food allergy directly impact the dermatitis. When it does, the most frequent culprits are:

- milk,
- eggs,
- nuts,
- gluten and
- shellfish.

The best test in a suspect case is a trial of restriction and possible rechallenge.

Answered by:
Dr. Scott Murray

10. Management of aortic stenosis

What is the management of patients with aortic stenosis (symptomatic and asymptomatic)?

Question submitted by:
Dr. Gaetan Y. Lavoie
Ste-Felicite, Quebec

Aortic stenosis (AS) patients who are asymptomatic should be followed clinically and by echocardiogram. The American College of Cardiology/American Heart Association guidelines[1] recommend asymptomatic AS patients to have serial echocardiographic tests with the following time intervals:

Severe AS: every year
Moderate AS: every two years
Mild AS: every five years

Echocardiograms should be performed whenever there is an important change in clinical symptoms or findings.

Patients with severe AS who develop symptoms, such as angina, dyspnea, or syncope, should be referred for aortic valve replacement (AVR). Patients often exhibit symptomatic improvement and an increase in survival after AVR.

Answered by:
Dr. Chi-Ming Chow

Reference:
1. Bonow RO, et al. ACC/AHA guidelines for the management of patients with valvular heart disease. J Am Coll Cardiol. 1998;32:1486–1588.

11. The use of ASA and warfarin in cardiac patients

I have seen some of my cardiac patients on warfarin and acetylsalicylic acid—what is the reasoning behind this?

Question submitted by:
Dr. Lindsay Kennedy
Calgary, Alberta

In general, the combination of warfarin and acetylsalicylic acid (ASA) is not recommended among patients with established ischemic heart disease, ischemic stroke, coronary artery bypass grafts, or atrial fibrillation due to lack of additional benefits and increased risk of bleeding. However, there are a few situations where such a combination is recommended.

According to the Seventh American College of Chest Physicians Conference on Antithrombotic and Thrombolytic Therapy, combination use of ASA and warfarin is recommended among:

1) High-risk myocardial infarction (MI) patients with combined use of moderate-intensity (international normalized ration [INR] is 2.0 to 3.0) oral warfarin, plus a low-dose ASA (≤ 100 mg, daily) for three months after the MI.[1]

   Examples of high-risk MI include:
   - Large anterior MI
   - Significant heart failure
   - Intracardiac thrombus visible on echocardiograph
   - History of a thromboembolic event)

2) Patients who have mechanical heart valves and additional risk factors. A target INR of 3.0 (range is 2.5 to 3.5), combined with low doses of ASA (75 mg to 100 mg, daily.[2] Examples of additional risk factors include:
   - Atrial fibrillation
   - MI
   - Left atrial enlargement
   - Endocardial damage
   - Low ejection fraction

In both these situations, the risk of bleeding is higher and the INR needs to be monitored very closely.

Answered by:
Dr. Chi-Ming Chow

12. Is skin testing useful for skin allergies?

How reliable is skin testing for determining skin allergies?

Question submitted by:
Dr. Sarah Varner
Toronto, Ontario

In patients with allergic skin disease, skin testing may be of value in establishing the cause, the implicating contributory factors or in ruling out suspected causes. For example, foods, medications or insect stings, may cause acute self-limited hives lasting a few hours up to a day or two. Appropriate skin testing with foods, medications, or hymenoptera venoms, will often indicate the cause of the urticaria. However, the results of skin testing must be contextual (*i.e.,* a positive skin test must be interpreted based upon a history of exposure at the appropriate time and manifestations that are consistent with the presumptive cause).

In children with atopic dermatitis, the allergic mechanisms leading to this skin disease are mixed with both an immediate hypersensitivity component and a delayed hypersensitivity component. Food allergies may contribute to worsening eczema in 30% to 50% of children. Pinpointing the specific food may require both prick skin testing with the foods in question, as well as atopic patch testing with the appropriate food protein. Avoidance of the offending food will often lead to improvement of the eczematous rash.

Answered by:
Dr. Peter Vadas

13. How do patients with shingles become non-infective?

How do patients with shingles become non-infective, especially for immuno-compromised relatives?

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

Shingles, if not disseminated, is contagious only by direct contact. If the lesions are well covered, infection is unlikely to be transmitted. In any case, the person is no longer considered to be contagious once all lesions are dry or crusted. As a rule, anyone who has had chicken pox is not susceptible to transmission from a case of shingles. Only the most severely immunocompromised can develop illness after reinfection.

Answered by:
Dr. Michael Libman

14. Getting rid of shiners

How do you get rid of dark circles around the eyes of Asian patients?

Question submitted by:
Dr. R. Lewis
Kamloops, British Columbia

I presume this question refers to the dark shiners, or dark circles, that are prominent in many skin types. Unfortunately, there is no greatly effective treatment for this.

These dark circles are felt to be due to vascular congestion and are more visible in atopics due to relative paleness of the surrounding skin. Dermatologists have tried various laser therapies, with poor results. Smoking increases this effect in some, so quitting smoking can help. As well, these dark circles tend to worsen with tiredness, so relieving stress and resting can help a bit. Various eye creams are of transient benefit at best. Effective cosmetic applications to mask the effects remains the best approach.

Answered by:
Dr. Scott Murray

15. About new basal long-acting insulin analogues

What differences (if any) is there between the two new insulins (insulin glargine & insulin detemir)?

Question submitted by:
Dr. B. Gore,
Vancouver, British Columbia

Both insulin glargine and detemir are newer basal long-acting insulin analogues. Their main advantage is that they do not peak and thus tend to have a more predictable profile and cause fewer hypoglycemic episodes compared to NPH and humulin N. Both can be used once daily, supplemented with short, rapid-acting insulin with meals, but a significant number of patients need twice daily administration. There is a suggestion that insulin detemir may have a less variable profile and cause less weight gain compared to insulin glargine—but these need further confirmation. Insulin glargine is currently available in a 1000 U vial only and needs to be administered via syringe, whereas insulin detemir comes in 300 U cartridges and is used with a pen. Insulin detemir is currently priced about 30% more than insulin glargine.

Answered by:
Dr. Hasnain Khandwala

16. Treating PCOS with metformin

Many patients ask how long to take metformin while treating polycystic ovary syndrome? Is it for a lifetime?

Question submitted by:
Dr. Tasneem Hussain, Toronto Ontario

At this time, there is no good evidence-based answer to this question. A significant number of patients with polycystic ovary syndrome (PCOS) have underlying insulin resistance, which leads to hyperandrogenemia, anovulation, menstrual abnormalities and infertility.

Treatment with metformin and recently thiazolidinediones, have been shown to reverse these abnormalities.

The question regarding the dose and duration of metformin treatment has not yet been answered. I tend to individualize the treatment for PCOS. If infertility is the issue, metformin with or without clomiphene are good options. Metformin is usually discontinued once gestation has been established; however, there is increasing evidence for its continued use throughout pregnancy. If hirsutism/hyperandrogenemia are main concerns, an oral contraceptive pill, with or without an antiandrogen like spironolactone, are good choices.

Answered by:
Dr. Hasnain Khandwala

17. About plantar warts and plantar clavus

What is the clinical difference between a plantar wart and a plantar clavus—how are they treated and cured?

Question submitted by:
Dr. R. Lewis, Kamloops, British Columbia

The distinction between a plantar wart and a clavus, or corn, is an important one to make. The proper management relies on this determination. There are a few clues that can help the clinician.

In general, a wart interrupts the skin lines, while a clavus accentuates the skin lines. So, look carefully at the lesion and if the lines in the skin seem to sweep around the lesion, it is more likely a wart. As well, a wart tends to be more painful with lateral compression and a clavus is tender on direct pressure. The finding of thrombosed vessels—the black dots patients often refer to as seeds, is also a clue to the diagnosis of a wart. In many cases, the proper examination of a lesion can only be completed after paring the lesion down to remove non-specific hyperkeratosis so the more distinctive features can be viewed.

A clavus can be cured by offloading the pressure points that produce the lesion—often with orthodics. Warts can respond to:

- caustic topicals,
- cryotherapy,
- surgery or
- expectant waiting.

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Answered by:
Dr. Scott Murray