Experts on Call

Answers to your questions from our medical experts

1. Imiquimod for Plantar Warts

What is the best way to use imiquimod for plantar warts when all other conventional treatments have been ineffective?

Submitted by: Charles Cheng, MD, Vancouver, British Columbia

Treatment of plantar warts with imiquimod is an off-label use of this drug, as it is only approved for treatment of anogenital warts. There are no randomized controlled trials of imiquimod, an immune-stimulating topical agent, for treatment of plantar warts. Also, any treatment of plantar warts must take into consideration that spontaneous involution may occur if the body is able to mount an immune response to the human papilloma virus.

In my experience, imiquimod has not been helpful in treating plantar warts largely because of its inability to penetrate through the hyperkeratotic surface of these warts. Most case reports in the literature of successful treatment of plantar warts with imiquimod have involved occluding the 5% imiquimod cream, or combining treatment of imiquimod with a keratolytic such as salicylic acid. If one choses to use this treatment off-label when other conventional treatments have been ineffective, I would suggest using a 40% salicylic acid pad in the morning, and 5% imiquimod cream under saran wrap occlusion at night. The wart should be pared prior to each salicylic acid treatment.

Answered by: Dr. Richard Haber

2. Screening for PCOS

What screening procedures do you implement for patients with polycystic ovary syndrome, and at what frequency?

Submitted by: Sara Rudge, MD, Burlington, Ontario

The diagnosis of polycystic ovary syndrome (PCOS) is clinical; however, other causes of oligo-ovulation and/or hyperandrogenism should be excluded. Minimal biochemical evaluation include hCG to rule out pregnancy, prolactin, and TSH/FSH (to rule out ovarian failure). As dyslipidemia and impaired glucose tolerance are associated with PCOS, a lipid screen and oral glucose tolerance test (OGTT) would be advised once the diagnosis of PCOS is made. Thereafter, the frequency of repeat testing depends on the clinical situation.

Resource
1. Azziz R, Carmina E, Dewailly D, et al. The Androgen Excess and PCOS Society Criteria for Polycystic Ovary Syndrome: The Complete Task Force. Fert Steril 2009;91(2):456-88.

Answered by: Dr. Victoria Davis

3. Hypercoagulability Screening

What lab tests would you recommend to screen for hypercoagulability?

Submitted by: Darryn Receveur, MD, Cold Lake, Alberta

Hypercoagulability testing can be helpful in determining the risk of recurrence of VTE and the duration of anticoagulation therapy in a patient with venous thromboembolic disease (VTE), including deep vein thrombosis (DVT) and pulmonary embolism (PE). There is no consensus on who exactly should be tested, but we recommend testing in patients with idiopathic VTE (*i.e.*, not provoked by surgery, immobility, pregnancy or malignancy), especially in younger patients, those with recurrent VTE, and those with VTE in unusual locations, such as portal, hepatic, mesenteric, or cerebral veins. Our hypercoagulability screen includes functional quantitative assays for Proteins C and S, and antithrombin, as well as testing for lupus anticoagulant, antiphospholipid antibodies, activated Protein C resistance (with genetic testing for Factor V Leiden, if positive), and determination of the Prothrombin G20210A gene mutation. Of note, Protein C and S levels cannot be accurately measured while patients are on vitamin K antagonists, such as warfarin. Also, antithrombin levels cannot be measured while patients are receiving heparin. The above hypercoagulability screen should not be ordered as part of the investigation for arterial thrombosis (*i.e.*, stroke), as only the lupus anticoagulant and antiphospholipid antibody testing are useful in the setting of arterial events. The rare exception to this would be in the setting of a paradoxical embolism (*i.e.*, a DVT embolizing through a patent foramen ovale and causing a stroke).

Answered by: Dr. Cyrus Hsia and Dr. Leonard Minuk

4. White Coat Syndrome

Can you rely on normal home blood pressure readings in a patient who is high (>140/50) at the office and presumably has "white coat syndrome"?

Submitted by: Keith Ferguson, MD, London, Ontario

Target home blood pressure (BP) is < 135/85 mmHg, and office BP is < 140/90 mmHg, in patients who do not have diabetes or renal failure. If a patient has normal home BPs and elevated office BPs, I would ask the patient to bring his home BP monitor to the office and compare the readings with the office BP monitor to ensure accuracy. Other options would be to do an echocardiogram to assess for left ventricular hypertropy (LVH), or perform a 24-hour ambulatory BP monitor (mean BP should be < 135/85 mmHg). Home BPs are very useful, as they provide feedback to the patient about the effectiveness of their antihypertensive regimen and may improve adherence to therapy.

Answered by: Dr. Bibiana Cujec

5. Role of DHEA in SLE

What is the current role, if any, of dehydroepiandrostenedione in the treatment of systemic lupus erythematosus?

Submitted by: Derrick Yates, MD, Callander, Ontario

Dehydroepiandrostenedione (DHEA) is an androgenic steroid. Because estrogen has been implicated in the pathogenesis of lupus, a disease that is nine times more common in women than in men, there was a hypothesis that DHEA may help in lupus. However, randomized clinical trials have yielded very mixed results. A number of placebo-controlled, randomized trials have been performed and have variably shown some benefit, but of modest amount; most studies show benefit in some outcome measures, but not others. For example, two studies showed similar results: an improvement in the patient's self-assessment, but no significant improvement in the physician's assessment of disease activity. One study showed a steroid-sparing effect, while others did not. In considering the use of DHEA, one must also keep in mind that a number of patients discontinue treatment due to side effects, including acne (in up to 40% of patients), hirsutism, and a decrease in HDL level. The latter is especially important given the increased atherogenic risk in lupus patients. Because benefit has not clearly been proven, and due to the side effects, DHEA has a minimal role in the current treatment of lupus.

Resource

1. Sawalha AH, Kovats S. Dehydroepiandrosterone in Systemic Lupus Erythematosus. Curr Rheumatol Rep. 2008 Aug;10(4):286-91.

Answered by: Dr. Michael Starr and Dr. Emil Nashi

6. Perioral Dermatitis Treatment in Pregnant or Breastfeeding Patient

What is the best treatment for perioral dermatitis in a pregnant or breastfeeding woman, when treatment with routine metronidazole topical treatments fails?

Submitted by: Manon Belliveau, MD, Moncton, New Brunswick

Strong (particularly fluorinated) topical steroids and oily or greasy cosmetics are all aggravating factors for perioral dermatitis and should be stopped. If the patient has not responded to topical metronidazole, I would then try 1 to 2% topical erythromycin or clindamycin (both FDA category B); both are safe to use during pregnancy or while breastfeeding. If there is no response to topical therapy and the patient has significant perioral dermatitis, I would then try oral erythromycin base at a dose of 500 mg b.i.d. for six to eight weeks, and taper this slowly once the patient has shown a significant response.

Answered by: Dr. Richard Haber

7. Recommended Management for Asbestos Exposure

If a patient has a chronic cough and the chest CT scan shows exposure to asbestos, what is the recommended course of action?

Submitted by: Cindy Ng, MD, Hamilton, Ontario

Asbestos exposure is associated with a number of lung and pleura diseases, including benign asbestos-related pleural effusion, pleural plaques, pleural fibrosi and visceroparietal reactions, mesothelioma, rounded atelectasis, asbestosis (*i.e.*, lung fibrosis), and lung cancer. Patients may be symptomatic, exhibiting cough, sputum production, dyspnea, and chest pain in most of these conditions. The recommended course of action will be determined by the presumed diagnosis, but will usually include characterization of the condition with chest imaging (*e.g.*, chest CT scan), and assessment of lung function impairment with pulmonary function tests (*e.g.*, spirometry, lung volumes and diffusing capacity). Tissue sampling may be needed for pathological diagnosis, particularly when a malignancy of pleura or lung is considered. Clinical management also requires advising the patient to avoid further exposure to asbestos and smoking (which can markedly increase the risk of lung cancer) and to appropriately notify agencies responsible for worker's compensation and occupational health and safety. Unfortunately, no active treatment has been shown to alter the outcome of benign conditions related to asbestos exposure.

Answered by: Dr. Paul Hernandez

8. Sleep Study to Diagnose RLS

Do you need a sleep study to confirm the diagnosis of restless legs syndrome?

Submitted by: Andrew Chow, MD, Mississauga, Ontario

Diagnosis of restless legs syndrome (RLS) is made by history and physical examination. The symptoms of RLS include an urge to move the legs, usually accompanied by uncomfortable sensations in the legs. These symptoms begin, or worsen, during periods of rest or inactivity, such as lying or sitting, and are partially or totally relieved by movement, such as walking or stretching. The symptoms are worse in the evening or at night time and interfere with falling asleep. About half of patients with RLS have accompanying periodic leg movement of sleep (PLMS).

Physical examination is usually normal in these individuals. The symptoms may correlate significantly with polysomnographic measures of PLMS and sleep efficiency. No laboratory test is used to identify RLS.

Although overnight polysomnography may help quantify periodic leg movements, its utility in the diagnosis of RLS is debatable. One study suggested that two polysomnographic measures, the index of periodic leg movements during nocturnal wakefulness and the mean subjective leg discomfort score during the suggested immobilization test, correctly classified 88% of subjects, with a diagnostic sensitivity of 82% and specificity of 100%. Most experts usually do not use polysomnography for the diagnosis of RLS unless there is a history of suspected PLMS.

Suggested Readings
1. Michaud M, Paquet J, Lavigne G, et al. Sleep Laboratory Diagnosis of Restless Legs Syndrome. Eur Neurol 2002;48(2):108-13.

Answered by: Dr. Abdul Qayyum Rana

9. Sulfonylureas in Type 2 Diabetes

Recognizing the rapid decline of ß-cells in type 2 diabetes, and the potential merits of "protectors" of remaining ß-cell function, should we limit the use of sulfonylureas?

Submitted by: Wayne Sullivan, MD, Halifax, Nova Scotia

As ß-cell function declines with age, more agents are often needed to control glucose levels in individuals with type 2 diabetes. Durability is one of many characteristics that should be considered when prescribing an agent. Studies have shown that, when one compares metformin, TZDs, and sulfonyureas, TZDs have the best durability and sulfonylureas have the worst durability. No studies have been properly performed with newer agents such as DPP-4 inhibitors or GLP-1 agonists, although animal studies show that they may have the potential of long durability. There are a number of other factors to consider as well, including side effects, weight change, edema, the risks of hypoglycemia and heart failure, and cost.

Answered by: Dr. Vincent Woo

10. Inositol to Treat Depression

What, if any, is the role of inositol in the treatment of depression, and are there any side effects?

Submitted by: Anonymous

Inositol is a naturally occurring nutrient that is usually classified as a carbocyclic polyol. It is a direct precursor of phospholipids, and it is a membrane constituent in the second messenger system used by many types of neurotransmitter receptor. It is found in many foods, particularly cereals with high bran content, nuts, beans, and fruit, especially cantaloupe, melons and oranges. Myo-inositol, the most prominent naturally occurring form of inositol, was classified as a member of the vitamin B complex until it was discovered that it can be synthesized by the body.

Inositol (12 to 16g q.d.) has recently been reported to have antidepressant, antianxiety, and antiobsessive-compulsive effects. These benefits remain to be more systematically explored. Myo-inositol measured by magnetic resonance spectroscopy (MRS) has been reported to be low in brains of bipolar disorder patients, in proportion to the severity of their depression.

Answered by: Dr. Hany Bissada

11. Desensitizing Allergic Individuals

Are there safe and effective means to desensitize allergic individuals with peanut or shellfish anaphylaxis?

Submitted by: **William Fair, MD,** Vernon, British Columbia

Allergen immunotherapy via the injection route has been used successfully for the treatment of allergic rhinoconjunctivitis and venom hypersensitivity for decades. Despite its efficacy in these settings, this approach has been shown to be unsafe for treatment of food allergy, due to an unacceptably high rate of anaphylactic reactions.[1] Currently, alternatives to subcutaneous injection therapy are being investigated for treatment of food allergy, one of which is oral desensitization.

Desensitization is defined as a change in the threshold dose of ingested food allergen necessary to cause allergic symptoms; this state is dependent upon ongoing food antigen exposure. In contrast, tolerance is the induction of long-term immunologic changes associated with the ability to ingest a food without symptoms and without ongoing therapy. Although fish desensitization has been reported, this has not been explored extensively, and, to my knowledge, shellfish desensitization has not been described in the recent literature.[2] Trials involving allergen-specific therapies have involved peanuts, cow's milk, hazelnuts, eggs, and kiwi. These have involved oral, sublingual, and epicutaneous methods of administration, and have shown varying success in increasing the threshold dose tolerated by patients. In addition, immunologic changes that have been demonstrated include reduction in specific IgE, increase in sIgG4, reduced Th2 cytokine production, and basophil/mast cell reactivity, all of which are associated with development of clinical tolerability. Oral immunotherapy appears to be effective in inducing desensitization in most patients, as well as oral tolerance in a subset of patients with food allergy.[3]

These kinds of studies, many of which are ongoing, are very encouraging, but they are all small and very preliminary. However, we are now closer to applying more definitive therapeutic options, and providing hope for food allergic patients and families. It should be noted that these approaches are associated with significant risk, and at present should only be conducted by experienced investigators in clinical trial centers. Ongoing studies will hopefully move toward broader clinical application in the future.

References
1. Oppenheimer JJ, Nelson HS, Bock SA, et al. Treatment of Peanut Allergy with Rush Immunotherapy. J Allergy Clin Immunol 1992;90(2):256-62.
2. Patriarca G, Nucera E, Roncallo C, et al. Oral Desensitizing Treatment in Food Allergy: Clinical and Immunological Results. Aliment Pharmacol Ther 2003;17(3):459-65.
3. Blumchen K, Ulbricht H, Staden U, et al. Oral Peanut Immunotherapy in Children with Peanut Anaphylaxis. J Allergy Clin Immunol 2010;126(1):83-91.

Answered by: **Dr. Tom Gerstner**

12. Gabapentin Use in Psychiatry

Does gabapentin really have a place in psychiatry? If yes, for what condition?

Submitted by: Anonymous

Gabapentin is a novel amino acid that has biochemical properties similar to the inhibitory amino acid neurotransmitter GABA. Gabapentin easily crosses the blood–brain barrier. It was developed as an antiepileptic drug and marketed for the adjunctive treatment of partial seizures with and without secondary generalization in epilepsy, in patients over 12-years-of-age. Gabapentin is also indicated for the management of postherpetic neuralgia in adults.

Early, open, uncontrolled reports suggested that adjunctive gabapentin was well tolerated and may benefit patients who have refractory mood disorders. However, in two controlled studies, gabapentin was ineffective. In treatment-resistant (primarily rapid-cycling bipolar) mood disorders, gabapentin monotherapy was no more effective than placebo.

Controlled studies have confirmed gabapentin utility in some anxiety disorders, with double-blind, placebo-controlled trials demonstrating efficacy in social phobia (*i.e.*, social anxiety disorder). Efficacy of gabapentin in other anxiety disorders, as suggested by open reports, remains to be confirmed in controlled studies.

In psychiatric outpatients, gabapentin is started at 300 mg h.s., and increased by 300 mg every four days as necessary. The target dose is 1,200 mg h.s., which is typically well tolerated.

Resource

1. Chapter 31.7. Kaplan & Sadock's Comprehensive Textbook of Psychiatry. 9th ed.

Answered by: Dr. Hany Bissada

13. Diastolic Dysfunction: Diagnosis and Treatment

What is the diagnosis and treatment of diastolic dysfunction?

Submitted by: Kelly Jones, MD, St. Thomas, Ontario

Diastolic dysfunction occurs when the left ventricle (LV) is stiff or relaxing poorly and fills at a higher pressure (*i.e.*, for any given LV volume, the diastolic pressure is higher than normal). Almost all patients with systolic dysfunction (LV ejection fraction < 50%) have some degree of diastolic dysfunction, because of scarring and increased collagen in the heart. The term, "heart failure secondary to diastolic dysfunction" is used when the patient has heart failure (peripheral and/or pulmonary edema, or elevated jugular venous pressure), has a normal or near normal LV ejection fraction (>50%), and no significant valvular disease.

Common causes of diastolic heart failure are hypertension, diabetes, coronary artery disease, sleep apnea, obesity, and chronic kidney disease. The diagnosis of diastolic heart failure can be made by a combination of clinical and echocardiographic parameters. These include elevated jugular venous pressure, peripheral and/or pulmonary edema, LV ejection fraction >50%, dilated atria, and evidence of elevated LV diastolic pressure, obtained indirectly by analysis of mitral inflow and Tissue Doppler of mitral annulus. Three types of diastolic dysfunction are identified by Doppler echocardiography. In order of increasing severity, they are impaired relaxation, pseudonormalized filling, and restrictive filling. Brain natriuretic peptide is commonly elevated in patients with diastolic heart failure, as well as in patients with decompensated systolic heart failure. Management of diastolic heart failure consists of diuretics as necessary and treatment of the underlying condition(s). There are no specific medications that improve survival in patients with diastolic heart failure. Mortality is similar to that of systolic heart failure.

Answered by: Dr. Bibiana Cujec

14. Severe Hypertriglyceridemia in Asymptomatic Patient

Should I treat severe hypertriglyceridemia in an asymptomatic patient?

Submitted by: S. Raj, MD, Calgary, Alberta

Severe hypertriglyceridemia (>10mM) can lead to acute pancreatitis. Such patients need to be treated. In these patients, secondary causes, such as poorly controlled diabetes mellitus, excessive alcohol intake, certain drugs (*e.g.*, glucocorticoids, cyclosporin, estrogens), and chronic renal failure need to be ruled out. There are also some genetic/inherited causes of hypertriglyceridemia. Often, treatment of the underlying cause and dietary counselling with significant fat reduction can improve the hypertriglyceridemia. If this is not the case, then specific medical treatment, such as fibrates, niacin, and, at times, insulin with or without metformin, will be necessary.

Answered by: Dr. Ally Prebtani

15. Management of Recurrent Nosebleeds

What is the best advice for parents of children with recurrent nose bleeds?

Submitted by: Roshan Dheda, MD, Bradford, Ontario

Epistaxis in children is common and is most frequently associated with digital trauma (picking). I will limit the discussion to chronic management of the condition rather than acute epistaxis treatment. Most children experience nose bleeds at some stage, and the chance of a sinister pathology or undiagnosed disorder causing the bleeding is very low.

Children aged two to twelve are most often affected. Bleeding usually occurs from the anterior septum, where there is rich blood supply and the mucosa is relatively sensitive to trauma. This area can be easily visualized with a speculum and appropriate lighting. Prominent vessels are often seen in the area and occasionally an ulcer or small "mound" where a bleeding vessel lies may be seen.

If the child is experiencing frequent or heavy bleeding and there is no evidence of any problem on the anterior septum, an ENT opinion should be sought. Nasal tumours, foreign bodies, haematological disorders and some hereditary disorders may present with epistaxis, but these situations are fairly rare.

The first and most important way to deal with recurrent anterior septal epistaxis is to avoid picking. Crusting associated with the bleeding can cause irritation and can aggravate the problem, so dealing with the crusting is important. Saline sprays are safe, but further trauma may be caused during its administration. Ointments are generally the best at keeping the mucosa moist and they should be delicately applied to the area. This can be done by a physician, using a cotton bud. Parents may have difficulty doing this so they can be advised to place the ointment in the vestibule of the nose and gently squeeze the nose to distribute the ointment inside (it does not have to go in far). Vaseline is generally the cheapest and easiest, and there are several other over-the-counter options available at pharmacies. Humidification of the room will also help prevent crusting.

Bacitracin ointment may be used if the area is very ulcerated or if local infection is evident. Systemic antibiotics are rarely needed.

Silver nitrate cautery may be used by a physician in select cases. Topical anaesthetic and decongestant should be administered. The bleeding must be anterior. There must be no, or very little, active bleeding. The agent should only be applied to a very small area, incorporating the vessels around the suspected bleeder, and only for a short period of time (around three seconds). The mucosal response is delayed so the silver nitrate should be removed from the nose and the impact assessed before further cautery. To avoid perforation, only one side should be cauterized at a time. The contralateral side can be treated three weeks later if required.

As for keeping the finger out of the nose – I will leave that up to each individual parent. However, we can help to make the nose a bit less irritated and crusted so children feel less compelled to put fingers there. Dx

Answered by: Dr. Ben Dixon