



Experts on Call

Answers to your questions
from our medical experts

1. Managing Prominauris



At what age should we refer a case of prominauris for surgery?

Submitted by: **Jean R. Cote, MD**, Lac-Drolet, Quebec

Prominauris (prominent ears) often results due to a combination of antihelix and conchal bowl deformity. They may be unilateral or bilateral. If the deformity is noticed very early in the infant's life, soft pressure bandages can be applied at night to encourage the ears to develop in a less prominent way. However, the cartilage soon becomes less malleable and surgery is required to correct the deformity. Most surgeons would not operate before the patient was three-years-old to allow the full deformity to develop. Most parents that request surgery want it before the child goes to school, to prevent teasing. Surgery involves reshaping the ear cartilage to make the ears less prominent. There are many variations on two common techniques; these techniques involve

scoring the anterior cartilage (Stenstrom technique) or using sutures to hold the cartilage in place (Mustarde technique). The patient wears a pressure dressing afterwards for seven to 14 days. Although usually straightforward, complications can result. As with all surgical procedures, bleeding and infection can complicate the surgery. Infection is particularly worrying from a cosmetic standpoint, as the ear cartilage can be destroyed, resulting in a challenging reconstructive problem.

Answered by: **Dr. Jonathan Irish**; and **Dr. Emma Barker**

2. Microalbuminuria as a Risk Factor for CVD



Is microalbuminuria a risk factor for CVD?

Submitted by: **Anonymous**

Microalbuminuria is associated with increased risk of coronary artery disease in both patients with and without diabetes, hypertension or kidney disease. It is a sign of endothelial dysfunction. In the Heart Outcomes Prevention Evaluation (HOPE) study, there was an increasing risk of adverse CV outcomes (stroke, MI, death) as the degree of microalbuminuria increased. Screening for microalbuminuria should be done on an early morning urine sample in the absence of fever, infection/inflammation, or exercise within 24 hours. There is evidence of an increase in mortality risk with microalbuminuria that is independent

of diabetes and hypertension. Nevertheless, screening for microalbuminuria is not recommended in the general population of nondiabetic patients without any risk factors, since the value of screening in these patients is unclear; the ability of any therapies to provide benefit in this setting is unknown and it is not cost-effective.

Resource

1. Gerstein HC, Mann JF, Yi Q, et al: Albuminuria And Risk Of Cardiovascular Events, Death, And Heart Failure In Diabetic And Nondiabetic Individuals. JAMA 2001; 286(4):421-6.

Answered by: **Dr. Bibiana Cujec**

3. Update on the Management of Gout



Please provide an update on the acute and chronic management of gout.

Submitted by: **Bill Taylor, MD**, Medicine Hat, Alberta

NSAIDs or COX II inhibitors remain the first-line treatment for acute gout. Traditional NSAIDs, such as naproxen or indomethacin, should be initiated early in full doses until the episode is completely resolved.

Oral colchicine (at recommended doses) may be used for patients who have contraindications or intolerance to NSAIDs or glucocorticoids, however, its use is limited by frequent GI adverse effects. Glucocorticoids (orally, intra-articular, or by intramuscular [IM] injection) are a useful alternative particularly in patients who cannot take NSAIDs. For example, oral prednisone in doses of 30 mg q.d. to 50 mg q.d. for one to two days, then tapered over five to seven days, may effectively reduce acute symptoms. A single injection of IM methylprednisolone or adrenocorticotrophic hormone may be equally effective.

In patients with chronic gout requiring long-term prophylactic therapy, the aim is to maintain the uric acid level < 360 µm/L. Allopurinol, a xanthine oxidase (XO) inhibitor, is the first-line and most commonly used agent. The starting dose is usually 100 mg with an average maintenance dose of 300 mg q.d. and up to 600 mg q.d. to 800 mg q.d. if needed. It is recommended when initiating allopurinol to add either colchicine (0.6 mg q.d.) or an NSAID for

a brief period in order to reduce a paradoxical increase in gout attacks until uric acid levels are stabilized.

Uricosuric agents, which enhance the renal excretion of uric acid, can be used in patients who do not tolerate allopurinol. Probenecid and sulfapyrazone are the most commonly used agents. However, these agents should be avoided in patients with renal stones.

The FDA recently approved febuxostat, a novel XO inhibitor, at doses of 40 mg and 80 mg q.d. p.o. for the chronic management of hyperuricemia in gout patients. In a large pivotal, Phase 3 clinical trial, febuxostat 80 mg was superior to febuxostat 40 mg and allopurinol 300/200 mg at achieving the main study outcome of serum uric acid < 6.0 mg/dL (357 µm/L) at the final visit (67%, 45% and 42%, respectively; P < .001 for both comparisons).

Resource

1. Schumacher HR Jr, Becker MA, Wortmann RL, et al: Effects of Febuxostat Versus Allopurinol and Placebo in Reducing Serum Urate in Subjects With Hyperuricemia and Gout: A 28-Week, Phase III, Randomized, Double-Blind, Parallel-Group Trial. *Arthritis Rheum* 2008; 59(11):1540-8.

Answered by: **Dr. Michael Starr**; and **Dr. Ahmad Al-Enizi**

4. Chronic and Aggressive Hiccups

? Hiccups are a common complaint in primary care. Some hiccups become chronic and aggressive. Can chlorpromazine be of any help?

Submitted by: Anonymous

A hiccup is an involuntary, spasmodic contraction of the diaphragm resulting in a sudden inspiration against the closure of the glottis. The medical term for hiccup is singultus, Latin for the act of catching one's breath while sobbing.

There are several treatments for hiccups, mostly involving non-medical and non-pharmacological maneuvers. If the hiccups are a prolonged nature and severe enough, then several drugs have been tried for hiccups. Chlorpromazine, an antipsychotic, has

been widely used to treat persistent hiccups. Unfortunately, no randomized trials have been done to evaluate the efficacy of this medication for hiccups. IV and oral administration has been used. Care must be taken when using chlorpromazine as there are several potential side-effects including dystonia, drowsiness and hypotension.

Answered by: Dr. Richmond Sy



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5. Oral Lichen Planus Involving the Buccal Mucosa

? Can you suggest treatment for a patient with a history of lichen planus involving the buccal mucosa?

Submitted by: Adam Kayumi, MD, Mississauga, Ontario

The prevalence of oral lichen planus ranges from 0.5% to 2.2%. A meta-analysis of 11 randomized placebo-controlled trials of treatments in oral lichen planus published in 2005¹ concluded that clinicians should be aware that there is a lack of strong evidence supporting the efficacy of any palliative therapy for symptomatic oral lichen planus.

From a clinical point of view, asymptomatic lichen planus does not need to be treated. First-line treatment for symptomatic lichen planus of the buccal mucosa would start with a moderately potent to super potent topical corticosteroid. Betamethasone 17-valerate 0.1% ointment, fluocinonide 0.05% ointment or clobetasol propionate 0.05% ointment can be applied on gauze squares and held in place for 15 minutes three times a day. Other topical agents that can be efficacious include topical tretinoin and topical tacrolimus ointment.

Refractory cases can have supplemental treatment with intralesional triamcinolone acetonide injections as necessary. Topical cyclosporin in an oral suspension has been tried with some success but is limited by cost.

The advantage of topical therapy is the low incidence of toxicity. In more refractory cases of oral lichen planus, consideration could be given to oral corticosteroid therapy and systemic retinoids such as isotretinoin or acitretin. These treatments are all associated with more systemic toxicity and are best administered by a dermatologist experienced in treating severe oral lichen planus.

Reference

1. Zakrzewska JM, Chan ES, Thornhill MH: A Systematic Review Of Placebo-Controlled Randomized Clinical Trials Of Treatments Used In Oral Lichen Planus. *Br J Dermatol* 2005; 153(2):336-41.

Answered by: Dr. Richard Haber

6. Treating a Diabetic Patient with a Large Amount of Microalbuminuria

? How to treat a patient with diabetes, with a large amount of microalbuminuria?

Submitted by: M. Broniewski, MD, Calgary, Alberta

Microalbuminuria is defined by an albumin to creatinine ratio (ACR) between 2.0 mg/mmol and 20.0 mg/mmol in men and between 2.8 mg/mmol and 28.0 mg/mmol in women. Microalbuminuria can be transiently elevated by major exercise, urinary tract infections, congestive heart failure, menses and acute illnesses and major fluctuations in glucose levels. Testing therefore should be delayed when these instances occur. Microalbuminuria also has to be shown to be persistent and should be present in two of three ACR tests taken one to eight weeks apart. Overt nephropathy

is defined as an ACR > 20.0 mg/mmol in men and > 28.0 mg/mmol in women. For the most part, 24 hour urine collections do not have to be performed.

Adults with diabetes and persistent albuminuria should receive an ACE inhibitor or an ARB to delay progression of kidney disease even in the absence of hypertension. If hypertension is present, a target BP of < 130/80 mmHg should be achieved. Often multiple antihypertensive agents will be required.

Answered by: Dr. Vincent Woo

7.

Health Risks of Black Mould



What are the health risks of black mould?

Submitted by: **Anonymous**

Toxic moulds are sometimes referred to as “black moulds” even though moulds are found in a variety of colours. Health risks relate to the type of mould; route (*i.e.*, inhalation, ingestion, dermal contact), dose and duration of exposure; and host factors (*e.g.*, age, immunocompetence, comorbid conditions). One particular toxic mould that has garnered a great deal of interest in the lay press is *Stachybotrys chartarum*, which colonizes materials rich in cellulose, such as hay, dry wall, wall paper and carpets, particularly in high humidity environments. *S. chartarum* can affect susceptible individuals through inhalation of spores or mycotoxins. Health

risks may include:

- Allergic reactions affecting the eyes, nose, sinuses and respiratory tract
- Irritation of mucous membranes
- Dermatitis

There have been reports that *S. chartarum* is also associated with acute episodes of pulmonary hemorrhage in infants and children.¹

Reference

1. Hossain MA, Ahmed MS, Ghannoum MA: Attributes Of *Stachybotrys Chartarum* And Its Association With Human Disease. *J Allergy Clin Immunol* 2004; 113(2):200-8.

Answered by: **Dr. Paul Hernandez**

8.

Fetal Fibronectin Testing



Is there any value to fetal fibronectin testing and what is the physiology behind the test?

Submitted by: **Maureen Conly, MD**, West Vancouver, British Columbia

Fetal fibronectin testing has value and has been adopted by more obstetrical units in Canada. Fetal fibronectin has a high negative predictive value for delivery in the next seven days in women who present with potential preterm labour (*i.e.*, if the test is negative the patient is 97% unlikely to enter preterm labour over the next seven days). However, if the test is positive it does not predict (12.5%) if the patient is in or will go into preterm labour. The ultimate goal to fibronectin testing is to reduce unnecessary admission into hospital and therapy (steroids, antibiotics, tocolytics), as well as decrease transfer to tertiary, regional or out of region centres. The test can also

provide reassurance to mothers and their family that birth of the baby is unlikely to occur over the next seven days. Fetal fibronectin is a glycoprotein produced by the chorionic membranes and is not normally found in cervical/vaginal secretions between 24 and 34 weeks gestation unless the cervix has undergone premature effacement and dilatation.

Resource

1. Peláez LM, Fox NS, Chasen ST: Negative Fetal Fibronectin: Who Is Still Treating For Threatened Preterm Labour And Does It Help? *J Perinat Med* 2008; 36(3):202-5.

Answered by: **Dr. Victoria Davis**

9. Tea Tree Oil and Psoriasis

? Does tea tree oil help clear psoriasis?

Submitted by: **D. Hawkins, MD**, Westbank, British Columbia

Tea tree oil is derived from *Melaleuca alternifolia*, an Australian plant and has been used as a traditional topical medication. Tea tree oil is found in many OTC products from shampoos to bath additives, as well as in topical treatments that claim to be effective in treating many common conditions from minor infections to insect bites. An Internet search will bring up many advertisements claiming the benefits of tea tree oil in treating dermatological conditions from psoriasis to warts to dermatitis.

Some research suggests tea tree oil may have some anti-inflammatory properties, including suppression of superoxide and cytokine production by stimulated monocytes and reduction of edema following provocation of contact hypersensitivity or injection of histamine in mouse ears.¹

Psoriasis is a common, chronic inflammatory dermatological condition characterized by

red plaques with silvery scale. Many evidence-based safe and effective treatment options exist from topicals to phototherapy to systemics and biologicals. Dermatologists can help patients with an effective, personalized treatment plan. Psoriasis is an exciting topic of research in dermatology as more is discovered about its pathogenesis and new treatment options are being developed.

We do not have any good data, either for or against the use of tea tree oil for psoriasis. We know that it can cause allergic contact dermatitis and patients should use it cautiously.

Resource

1. Camp RD: The Wizard Of Oz, Or The Intriguing Tale Of The Tea Tree. *J Invest Dermatol* 2004; 123(4):xviii-xix.

Answered by: **Dr. Charles Lynde**; and **Dr. John Kraft**

10. Isolated Low HDL-C Levels

? Should isolated low HDL-C levels always be treated and how effective and how well tolerated is niacin therapy?

Submitted by: **Anonymous**

Elevated levels of HDL-C (high density lipoprotein) are associated with abdominal obesity and are an independent determinant of increased CV risk. The Framingham Heart Score has incorporated the level of HDL-C into the global assessment of risk for developing coronary artery disease (CAD) in asymptomatic patients. Treatment for hyperlipidemia should always be individualized; however, isolated low levels of HDL-C (despite the increased CV risk) are generally not treated with medication in the absence of any CAD or CAD risk factors. Aerobic activity,

lifestyle modification (stop smoking) and weight loss can all help lower HDL-C levels. Niacin (nicotinic acid) is one of several drugs that are used to treat low levels of HDL-C. At clinical doses, it can raise HDL-C levels by up to 35%. Flushing, pruitus, hyperuricemia and hyperglycemia are not uncommon side-effects, but if the medication is used properly in the proper clinical context, the risk of adverse CV events can be lowered.

Answered by: **Dr. Richard Sheppard**

11. Omega-3 and Heart Disease Prevention



What is the consensus, if any, on omega-3 and heart disease prevention?

Submitted by: **Anonymous**

Omega-3 fatty acids (polyunsaturated fatty acids) include eicosapentaenoic acid (EPA) and docosahexaenoic acid (DHA). Rich sources of omega-3 fatty acids are fatty fish, especially salmon and plant sources such as flaxseed and flaxseed oil, canola oil, soybean oil and nuts. Omega-3 fatty acids have anti-inflammatory effects, improve endothelial function, decrease clotting, lower high BP, reduce elevated cholesterol and triglycerides, may prevent atrial fibrillation and ventricular tachycardia/sudden cardiac death and prevent atherosclerotic plaque formation.

Evidence for prevention of vascular events with omega-3 supplements depends upon baseline risk and concomitant therapies in different study populations. *The Gruppo Italiano per lo Studio della Sopravvivenza nell'Infarto Miocardico* (GISSI)-Prevenzione study looked at omega-3 polyunsaturated fatty acids in a large group of patients following MI and found a small decrease in mortality with the supplement.¹ A meta-analysis of 11 studies involving 16,806 patients found that, compared to a control diet or placebo, a diet enriched with omega-3 fatty acids or the use of supplements was associated with significant reductions in fatal infarction (risk ratio 0.7, 95% CI 0.6-0.8), sudden death (risk ratio 0.7, 95% CI 0.6-0.9) and total mortality (risk ratio 0.8, 95% CI 0.7-0.9).² The benefits were the same for an enriched diet or supplements.

Of note, high doses of omega-3 may cause GI upset, diarrhea and nausea as well as a fish

smell. Omega-3 is contraindicated in individuals with active bleeding and should be used with caution in individuals taking warfarin, ASA, NSAIDs, or antiplatelet agents (e.g., ticlopidine, clopidogrel, dipyridamole). Omega-3 supplements should be discontinued 14 days prior to dental or surgical procedures.

Omega-3 in high doses (> 15 g q.d.) can lower triglyceride levels by approximately 50% in patients with hypertriglyceridemia and is recommended for this purpose. A diet rich in vegetables, fruit, whole grain cereals and polyunsaturated and monounsaturated oils including omega-3 fatty acids is a general lifestyle recommendation to decrease risk of vascular disease. Omega-3 supplements are not otherwise routinely recommended for secondary prevention of coronary artery disease. I would caution patients against omega-3 supplements if they are on ASA and clopidogrel or warfarin because of the risk of excessive bleeding.

References

1. GISSI Prevenzione Investigators. Dietary Supplementation With N-3 Polyunsaturated Fatty Acids And Vitamin E After Myocardial Infarction: Results Of The GISSI-Prevenzione Trial. *Lancet* 1999; 354(9177):447-55.
2. Bucher HC, Hengstler P, Schindler C, et al: N-3 Polyunsaturated Fatty Acids In Coronary Heart Disease: A Meta-Analysis Of Randomized Controlled Trials. *Am J Med* 2002; 112(4):298-304.

Answered by: **Dr. Bibiana Cujec**

12. Stopping Leukotriene Receptor Antagonists Before Allergy Testing



Should leukotriene receptor antagonists be stopped before allergy testing? If so, how many days prior to testing?

Submitted by: [Nathalie Leroux, MD](#), Fenwick, Ontario

Epicutaneous testing (including skin prick and puncture testing) is used to assess the presence of specific IgE to a suspected allergen (inhalant or food). A small amount of allergen is introduced into the epithelial layers where mast cells, if lined with specific IgE (sIgE) to the allergen being tested, will degranulate and release histamine in response to sIgE cross-linking following allergen exposure. Thus, this is a functional assay of sIgE, in contrast to the radioallergosorbent (RAST) test which simply measures the level of sIgE against a given allergen. Although no specific precautions are required on the part of the patient prior to RAST testing, it is less sensitive than skin prick test (SPT), resulting in a greater number of false negative results. Intradermal skin testing is even more sensitive than SPT and is usually employed in the setting of venom and drug testing. Since all skin tests are dependent on the ability of histamine release from epithelial mast cells and the resultant wheal and flare response to histamine, patients undergoing all skin tests need to avoid antihistamines prior to testing. The length of time depends upon the

antihistamines in question, which corresponds to their relative half-life. First-generation antihistamines reduce skin reactivity for up to 24 hours (e.g., diphenhydramine, chlorpheniramine). Second-generation agents, such as cetirizine, loratadine, desloratadine, fexofenadine are potent drugs in blocking the skin reaction from three to 10 days. Astemizole (no longer available in most countries) has an effect for up to 60 days. H₂ antihistamines have a limited inhibitory activity on skin tests and their avoidance on the day of testing is probably sufficient to prevent suppression of skin tests. In addition, other medications with known antihistamine effects also need to be avoided prior to testing. These include ketotifen (five days prior), tricyclic antidepressants (two to three weeks), as well as antiemetic agents of the phenothiazine class. Topical or systemic steroids do not have a significant effect on skin testing, nor do leukotriene antagonists.

Answered by: [Dr. Tom Gerstner](#)

13. Significance of Microscopic Colitis



What is the significance and treatment of microscopic colitis?

Submitted by: **Dudu A. Pallie, MD,**
St. Catharines, Ontario

Microscopic colitis, which includes both collagenous and lymphocytic colitis, is characterized by watery diarrhea with endoscopically or radiologically normal mucosa with characteristic histology. Therefore, colonic biopsy is required to make the diagnosis.

The natural history is usually intermittent with a slightly more favourable outcome in patients with the lymphocytic form of the disease. Patients should be reassured as microscopic colitis is believed to have a benign prognosis without increased mortality or deterioration.

It has been linked with a number of medications including NSAIDs, simvastatin, lansoprazole, ticlopidine, sertraline, ranitidine and acarbose. Microscopic colitis has also been associated with celiac disease.

Treatment includes cessation of suspected associated medications and testing for celiac disease. Budesonide has been shown to be effective in the induction of remission in patients with both forms of microscopic colitis and to maintain remission in patients with collagenous colitis. Alternate therapies include mesalamine, bismuth, cholestyramine and prednisone.

Resources

1. Chande N, MacDonald JK, McDonald JW: Interventions For Treating Microscopic Colitis: A Cochrane Inflammatory Bowel Disease And Functional Bowel Disorders Review Group Systematic Review Of Randomized Trials. *Am J Gastroenterology* 2009; 104(1):235-41.
2. Bonderup OK, Hansen JB, Teglbjaerg PS, et al: Long-Term Budesonide Treatment Of Collagenous Colitis: A Randomised, Double-Blind, Placebo-Controlled Trial. *Gut* 2009; 58(1):68-72.

Answered by: **Dr. Robert J. Bailey;** and
Dr. Karen I. Kroeker

ELIDEL* (pimecrolimus) is indicated as second-line therapy for short-term and intermittent long-term therapy of **mild to moderate atopic dermatitis** in non-immunocompromised patients 2 years of age and older, in whom the use of alternative, conventional therapies is deemed inadvisable because of potential risks, or in the treatment of patients who are not adequately responsive to or intolerant of alternative conventional therapies.

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14. Dealing with Adult Nightmares and Sleepwalking

? How do you deal with adult nightmares or sleepwalking?

Submitted by: J. C. Maytham, MD, Kingsville, Ontario

Nightmares are anxiety-provoking dreams that occur during rapid eye movement (REM) sleep. Nightmares are typically complex dreams that become increasingly frightening toward the end, culminating in an awakening, usually in the second half of the sleep cycle. Because they are REM sleep-related dreams, they are usually terminated with arousal and the individual remembers the content. There is seldom talking, screaming, walking, or striking out associated with nightmares. Treatment of nightmares, if required due to severity, consists of REM suppression using a selective serotonin reuptake inhibitor. Also tricyclic antidepressants do suppress REM sleep.

Sleepwalking is manifested by repeated episodes of complex motor behaviour initiated during stages 3 and 4 sleep (non-REM sleep), including getting up from bed and walking, reduced alertness and responsiveness and blank stare. Patients have limited recall for the events of the episode. Because it arises from slow wave sleep, the patient is difficult to awaken, confused and amnesic. Treatment consists of suppressing slow (delta) waves using a benzodiazepine such as clonazepam 0.5 mg to 1 mg h.s.

Answered by: Dr. Hany Bissada

15. Monitoring Chronic Hepatitis B Carriers for Liver Cancer

? Should we be monitoring chronic Hepatitis B carriers for the development of liver cancer with regular ultrasounds?

Submitted by: Anonymous

Practice guidelines for surveillance of hepatocellular carcinoma (HCC) has been published by the American Association Study of Liver Diseases (AASLD). AASLD practice guidelines recommend surveillance for Hepatitis B carriers:

- Asian males > 40-years-old
- Asian females > 50-years-old
- All cirrhotic Hepatitis B carriers
- Family history of HCC
- Africans > 20-years-old
- Any carrier > 40-years-old with persistent or intermittent alanine aminotransferase elevation and/or high Hepatitis B virus DNA levels > 2,000 IU/ml

Surveillance for HCC should be performed using ultrasonography (US). Patients should be screened at six to 12 month intervals.

α -fetoprotein (AFP) is less sensitive, specific and accurate than US. AFP can be used alone if US is not readily available. US and AFP can both be employed for HCC surveillance at the discretion of the clinician.

Resource

1. Lok AS, McMahon BJ: AASLD Practice Guidelines for Chronic Hepatitis B. *Hepatology* 2007; 45(2):507-39.

Answered by: Dr. Richmond Sy

16. Cyproterone and Isotretinoin in Combination for Acne



Are cyproterone and isotretinoin, together, of any benefit for Pillsbury 4 or acne conglobata?

Submitted by: [Peter Lee, MD](#), New Glasgow, Nova Scotia

Usually oral isotretinoin is used as monotherapy for grade 4 or conglobate acne vulgaris. The situation I could see cyproterone being used in conjunction with isotretinoin is in a female patient with a hyperandrogenic condition and an anti-androgen such as cyproterone acetate was used to prevent a recurrence of the acne after an appropriate course of isotretinoin. These women would be at a high risk for their acne to relapse post isotretinoin because of their increased androgens. Cyproterone acetate would usually not be used alone unless one could be assured that pregnancy would not occur while on this drug (the woman has had a hysterectomy, is post-menopausal, has an IUD, or is not sexually active) because of the risk of feminizing a male fetus should a pregnancy

occur while on the drug. More commonly, the cyproterone would be used in conjunction with an OC which would also be helpful in treating and preventing a recurrence of the acne as well.

As sexually active women going on isotretinoin require two forms of birth control at the same time, one of which is the OC, use of Diane 35™ which contains 2 mg of cyproterone acetate would be a useful OC in the situation of a woman with conglobate acne vulgaris and a hyperandrogenic state going on isotretinoin.

Answered by: [Dr. Richard Haber](#)

17. Investigation of Malignant Otitis Externa



Investigation and treatment of malignant otitis externa (MOE)?

Submitted by: [Anonymous](#)

MOE is an osteomyelitis of the bone adjacent to the external auditory canal. Initially, it involves the tympanic plate but it may spread to involve the skull base and petrous portion of the temporal bone. It presents with severe pain and granulation tissue deep within the external auditory canal. It typically occurs in the elderly diabetic. However, any patient that has severe, constant, deep otalgia, resistant to conventional measures, should have this diagnosis considered. The most common organism is *pseudomonas aeruginosa* and it may result in cranial nerve palsies (seventh to twelfth), meningitis, sigmoid sinus thrombosis, brain abscess and death.

Investigating MOE includes a microbiology swab of the external auditory canal, biopsy with histological analysis of granulation tissue, blood glucose level and imaging. Imaging includes a high definition CT scan of the petrous temporal bone, including brain with contrast. Treatment includes high dose IV antibiotics, specific to the organism cultured. Attention to diabetic control is important. Patients also require strong analgesia. Even with aggressive treatment there is still a significant mortality.

Answered by: [Dr. Jonathan Irish](#); [Dr. Emma Barker](#); and [Dr. Sanjay Verma](#)

18. Stopping Risedronate or Alendronate Therapy



Can risedronate or alendronate be stopped if the bone density becomes normal (for a certain period)?

Submitted by: **Claude Roberge, MD**, Rock Forest, Quebec

There is currently no consensus on how long to continue bisphosphonate therapy. However, for some women, stopping therapy after five years may be reasonable, as there appears to be a residual benefit on BMD and fractures for up to five years as was illustrated in the Fracture Intervention Trial Long-term Extension (FLEX)¹ in post-menopausal women who had previously received alendronate for five years in the Fracture Intervention Trial (FIT).

At the completion of FIT, women were randomly assigned to an additional five years of alendronate or placebo. Women at highest risk for fracture were excluded from FLEX (those with FLEX baseline T-scores either < -3.5, or below their FIT baseline). In women who were switched to placebo after five years of alendronate, there was a gradual decline in

BMD, but mean BMD remained at or higher than levels 10 years earlier. There was also no significant difference in the rate of vertebral fracture.

This data provides evidence that, stopping bisphosphonate therapy after five years (with careful BMD and risk factor assessment follow-up) may be reasonable for some women provided they are not in the highest risk category for fractures.

Reference

1. Black DM, Schwartz AV, Ensrud KE, et al: Effects Of Continuing Or Stopping Alendronate After 5 Years Of Treatment: The Fracture Intervention Trial Long-Term Extension (FLEX): A Randomized Trial. *JAMA* 2006; 296(24):2927-38.

Answered by: **Dr. Michael Starr**; and **Dr. Sabrina Fallavollita**

19. Asthma in Preschool Children



How would you investigate suspected asthma in a child less than five-years-of-age?

Submitted by: **Dalvinder S. Toor, MD**, Calgary, Alberta

Diagnosis of asthma in preschool children is a major clinical challenge due to the broad differential diagnosis for symptoms such as wheezing and the lack of available objective measures in this age group.¹ In the preschool age child, wheezing (particularly if persistent and unassociated with colds) accompanied by the atopic phenotype (eosinophilia, allergic rhinitis or parental history of atopy) greatly increases the likelihood of persistent asthma as the diagnosis. However, confirmation of the clinical diagnosis of asthma with objective measures (*i.e.*, pulmonary function tests) is

not practical for children under age six. Research into newer measures of lung function (*e.g.*, forced oscillation technique) that require less patient cooperation than traditional pulmonary function tests is ongoing and holds promise for the future.²

References

1. Becker A, Bérubé D, Chad Z, et al: Canadian Pediatric Asthma Consensus Guidelines, 2003 (Update To December 2004): Introduction. *CMAJ* 2005; 173(6 Suppl):S12-4.
2. Lall CA, Cheng N, Hernandez P, et al: Airway Resistance Variability And Response To Bronchodilator In Children With Asthma. *Eur Respir J* 2007; 30(2):260-8.

Answered by: **Dr. Paul Hernandez**

20. Ultrasound Showing Fatty Liver



How do you deal with a patient whose ultrasound shows fatty liver?

Submitted by: A. M. Debuno, MD, Collingwood, Ontario

Liver ultrasonography is useful in supporting the clinical diagnosis of fatty liver, but it does not establish the diagnosis or indicate the cause of the steatosis. Diffuse fatty infiltration of the liver is characterized by a diffuse bright hyperechoic pattern. Thirty per cent of hepatocytes must be infiltrated with fat before detection and negative ultrasonographic findings do not exclude fatty liver. The sensitivity of liver ultrasonography for steatosis is 94% and its specificity is 84%.

Fatty liver is caused by two categories of diseases:

- Nonalcoholic fatty liver disease (NAFLD)
- Alcohol induced and drug-related liver disease

NAFLD is commonly associated with obesity, hyperlipidemia, or diabetes mellitus. A detailed history with physical examination concentrating on the above mentioned diseases and drug history including corticosteroids, amiodarone, methotrexate and tamoxifen to find a possible risk factor is the first step for the work-up of patients with ultrasound showing fatty liver. Clinical conditions (total parenteral nutrition, protein-calorie malnutrition, jejunioileal bypass) and disorders

(bulimia, celiac disease, chronic Hepatitis C) can be associated with fatty liver.

NAFLD should be considered in all asymptomatic patients with chronic Hepatitis of undetermined nature and it is not excluded by normal body weight or the absence of risk factors.

Further work-up for ultrasound finding of fatty liver include serum level of aspartate aminotransferase (AST) and alanine aminotransferase (ALT). A minority of patients will have an increase more than threefold the upper limit of normal. The serum AST:ALT ratio is < 1 in 65% to 90% of patients with NAFLD and serum AST:ALT ratio of ≥ 2 strongly suggests alcoholic liver disease.

The initial management is modification of lifestyle and optimum control of risk factors such as diabetes, dyslipidemia and advice for alcohol cessation. With persistent elevation of liver enzymes the patient needs further investigation ruling out other causes of chronic liver disease.

Answered by: **Dr. Robert J. Bailey;** and **Dr. Ahmed A. Mohamed**

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21. Onychomycosis



Is there any evidence that other treatments, besides oral antifungals agents, are effective for onychomycosis?

Submitted by: **Gary Berg, MD**, Peterborough, Ontario

Onychomycosis is difficult to cure and has a high rate of recurrence. In general, fingernail onychomycosis responds better to treatment than toenail onychomycosis. Currently, oral antifungal agents are the best treatment for onychomycosis with oral terbinafine, which is fungicidal, having the highest rate of mycological and clinical cure of the systemic antifungal agents.

The only topical antifungal agent approved for use in Canada is Penlac™ which contains 8% ciclopirox olamine in a penetrating lacquer. It needs to be applied to affected nails daily for 48 weeks. It also suggested that nail debridement be done once a week in conjunction with using this topical therapy.

Penlac™ is indicated for cases of mild to moderate infection (< 50% of the nail affected) without matrix involvement and with only three to four nails involved. The mycological cure rate based on a negative potassium hydroxide and fungal culture was only 33% in US trials. There have been studies suggesting a synergistic effect if Penlac™ is used concomitantly with an oral antifungal such as terbinafine with a higher mycological cure with the combination therapy vs. oral therapy alone.

Answered by: **Dr. Richard Haber**

22. Length of PPI Therapy



How long to stay on PPIs for simple heartburn?

Submitted by: **Jane Purvis, MD**, Peterborough, Ontario

The most common and effective treatment for gastroesophageal reflux disease (GERD) is to reduce gastric acid with a PPI. There are numerous trials that have established the efficacy of PPI therapy in reducing the symptoms of GERD. It is often necessary to stay on a maintenance dose of PPIs to prevent relapse of symptoms. It is reasonable to treat for three months and then discontinue therapy and see what happens. Approximately 55% of recurrences will occur within the first month and 75% will reoccur in one year. If

symptoms do repeat in less than three months, then it is reasonable to assume that long-term maintenance therapy is necessary.

Resource

1. Ip S, Bonis P, Tatsioni A, et al: Comparative Effectiveness of Management Strategies for Gastroesophageal Reflux Disease. Evidence Report/Technology Assessment No. 1. (Prepared by Tufts-New England Medical Center. Evidence-based Practice Center under Contract No. 290-02-0022.) Rockville, MD: Agency for Healthcare Research and Quality. December 2005. Available at: <http://www.effectivehealthcare.ahrq.gov/reports/final.cfm>.

Answered by: **Dr. Richmond Sy**

23. Clark's Nevus



What do you do with a biopsy report showing “clark’s nevus” on a mole on a patient’s back?

Submitted by: [Gary Neumann, MD](#), London, Ontario

A Clark’s nevus is a benign melanocytic nevus. They are quite common, found in more than half of Caucasian patients. On microscopic examination, they are classified as junctional (nests of melanocytes at the dermoepidermal junction), dermal (nests in the dermis), or compound (nests at the dermoepidermal junction and in the dermis) and show no features to suggest malignancy. A “dysplastic” nevus is sometimes used synonymously for a Clark’s nevus, but is misleading as these lesions are classically not premalignant. However, a histology report suggesting an “atypical” nevus is worrisome, as it has features to suggest a melanoma but a conclusive diagnosis is not possible and these lesions often have to be re-excised with conservative margins.

Clinically, a Clark’s nevus can sometimes be difficult to distinguish from a melanoma, hence it is one of the most frequently biopsied skin lesions. Lesions suspicious for melanoma are characterized by the ABCDs, but a benign Clark’s nevus can also have these features:

- **A**ssymetry
- **I**rregular **B**orders
- **M**ore than one **C**olour
- **D**iameter > 5 mm to 6mm

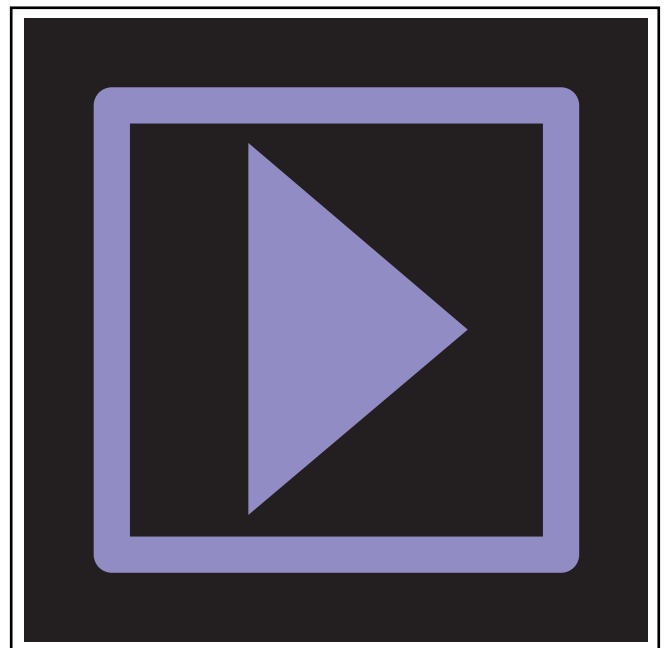
We also tell patients when performing self-skin exams to also look for E—that is, any **E**volving or new skin lesions.

It is not clear if having a histologically confirmed atypical melanocytic nevus increases one’s risk for melanoma. Risk is more often determined clinically with important factors being a past personal history of melanoma, intermittent high-intensity sun exposure to fair skin, family history of melanoma/atypical nevi, presence of clinically atypical nevi and total numbers of nevi on the skin.

The vast majority of atypical melanocytic nevi will not progress to melanoma. However,

not all are exempt and patients require regular monitoring by a dermatologist. Consider referral to a dermatologist in a specialized pigmented lesion clinic where possible. The dermatologist will determine the need for re-excision based on histologic findings such as the presence of “severe” cytologic atypia. A full skin exam is done to look for other atypical lesions. Patients are counselled on the ABCDEs, need for complete self-skin exams every one to two months, sunscreen use (SPF 30+), protective clothing (e.g., wide-brimmed hat) and sun avoidance between peak hours (11 a.m. to 4 p.m.). High-quality digital photographs are helpful to use during skin exams to look for new or changing lesions. Screening of first-degree relatives is also offered when possible. Depending on the number of atypical nevi, personal or family history of melanoma, regular follow-up varies from three to 12 months.

Answered by: [Dr. Charles Lynde](#); and [Dr. John Kraft](#)



24. Managing a Pregnant Woman with Sinus Tachycardia

? I saw a 33-year-old woman who was at 34 weeks gestation and felt perfectly well with persistent sinus tachycardia (rate 130 bpm to 160 bpm). Her TSH was normal. Pulmonary embolism was also ruled out. What else should I think about and when should I be concerned?

Submitted by: [Rosemarie Schwarz, MD](#), Oakville, Ontario

Sinus tachycardia is common during pregnancy but not to this degree. Hyperthyroidism and pulmonary embolism are important causes of sinus tachycardia and were appropriately excluded. Pheochromocytoma is possible although it is usually associated with hypertension. Anemia and heart failure secondary to peripartum cardiomyopathy should also be considered. The patient should have a complete blood count and an ECHO. I would also do a Holter monitor to assess heart rate variability. It is very unusual to have a persistent sinus tachycardia without a physiological stressor (such as anemia, hypovolemia, infection, heart failure, hypoxemia) or drugs such

as cocaine, caffeine, theophylline and β -agonists (e.g., salbutamol). It is possible that this is an arrhythmia such as sinus node reentrant tachycardia, atrial flutter or an ectopic atrial tachycardia. Some patients have inappropriate sinus tachycardia due to decreased vagal tone or β -adrenergic hypersensitivity. Treatment with a β -blocker may be helpful in this setting.

Answered by: [Dr. Bibiana Cujec](#)

25. Interpreting a Suppressed TSH

? How does one interpret a suppressed TSH and a normal T4/T3?

Submitted by: [Catherine Jean, MD](#), Montreal, Quebec

One must always assess the patient clinically when trying to interpret thyroid function tests. The most common situation this comes up in is patients already on thyroid replacement who are getting just a bit too high a dose. Cutting the levothyroxine replacement dose will often normalize the TSH in a few weeks.

Another situation this occurs in is subclinical hyperthyroidism when the patient is on no thyroid medications. Often the ft3 and possibly the ft4 will be in the upper range of

normal. Often individuals are asymptomatic or with very mild symptoms of hyperthyroidism. Other possibilities include medications, early pregnancy, pituitary disease, hospitalization and others and therefore the clinical picture and other laboratory measurements may be helpful in deciding how to interpret and follow-up this situation.

Answered by: [Dr. Vincent Woo](#)

26. Medications for Dementia Patients with Chronic Pain

What narcotic medications can be used for dementia patients with chronic pain?



Submitted by: **Atul Mehra, MD**, Coquitlam, British Columbia

A major difficulty in assessing and managing pain in the presence of advanced dementia is the inability of these patients to self-report their experience of pain. Nevertheless, observational data from nursing home patients with advanced dementia and data from subjects with mild to moderate dementia, suggest that dementing illnesses do not alter the fundamental experience of pain. Patients with dementia, however, are often unable to express pain adequately, request analgesics, or operate patient-controlled analgesic pumps. It is both logical and in the patient's best interest to assume that pain which is distressing to people who are cognitively intact is likely to be similarly distressing to those with cognitive impairment and that the experiences of pain of the cognitively intact can serve as a reasonable surrogate for those with advanced dementia.

Clearly the inability of the dementia subject to communicate and report pain may prevent accurate pain assessment and thereby lead to suboptimal therapy. Many doctors are reluctant to give opioids to patients with dementia, because they worry about precipitating a delirious episode. Overall, the literature on pain treatments for patients with dementia is deficient and the area deserves more research attention. For that reason, it is difficult to recommend specific narcotic medications for the management of chronic pain in patients with dementia. Certainly, aging brain and organ systems are sensitive to opioid analgesics, however, it is fair to say that most of these drugs are safe if they are sensibly prescribed (*i.e.*, "start slow and go slow") and if we are taking into consideration the age-related alterations in drug distribution, metabolism and excretion that may result in a longer duration of action

and greater plasma concentration for these drugs. These changes may lead to increased responsiveness to opioids, with an accompanying increased risk of drug toxicity and adverse reactions, hence the importance of regularly monitoring patients for side-effects.

Although it is beyond the scope of this question and answer discussion to describe individual opioid analgesics, it is however important to keep in mind that the following opioid medications are to be avoided in the elderly patient with or without dementia:

- Meperidine should be avoided in the elderly, as renal excretion of normeperidine, a neurotoxic metabolite, is often delayed in this population. Because of this potential toxic effect and the availability of alternative opioid analgesics, meperidine is not recommended for either acute or persistent pain management
- Pentazocine often leads to central nervous system excitement, confusion and agitation and its use should be avoided in frail, older patients
- Methadone has a long and variable half-life, which makes it difficult to titrate, especially in older adults with altered renal and hepatic function. Very careful monitoring and ample clinical experience are needed because of the propensity for drug accumulation and the wide variation in apparent relative potency

Resources

1. The Management Of Chronic Pain In Older Persons. AGS Panel on Chronic Pain in Older Persons. American Geriatrics Society. *Geriatrics* 1998; 53(Suppl 3):S8-24.
2. AGS Clinical Practice Guidelines: The Management Of Chronic Pain In Older Persons. *Geriatrics* 1998; 53(Suppl 3):S6-7.
3. American Medical Association: http://www.ama-cmeonline.com/pain_mgmt/module05/sum/index.htm. Accessed: January 5, 2009.

Answered by: **Dr. Hany Bissada**

27. Post-Concussion Syndrome

When can people return to work after a post-concussion syndrome?



Submitted by: **Anonymous**

Post-concussion syndrome happens in a large proportion of patients after a mild traumatic brain injury. There are a number of well-documented symptoms that can come with this syndrome:

- Headaches and post-concussional migraines
- Vague dizziness and imbalance, as well as benign paroxysmal positional vertigo
- Irritability, mood swings, mild depression and anxiety
- Cognitive changes, usually difficulty with attention and concentration leading to a sensation of poor memory
- Sleep changes, usually irrespective of mood status and usually insomnia

In the majority of people (90% to 95%), the symptoms of the post-concussion syndrome will clear up within three months. This is very important to stress to patients who come in with these symptoms post mild head injury. In the remainder of patients whose symptoms do not clear up in the three month time frame, there is usually a comorbid factor

and this is usually untreated anxiety or depression.

Most patients will be able to return to work by three months. To return before that, or if they are still symptomatic after three months:

- Return to work will depend on the patient's particular job situation. For example:
 - Scaffolding worker requiring excellent balance
 - School bus driver requiring excellent concentration and attention

Specialized testing can help you determine their safety to return to work. For example, you can send them for electronystagmography testing for dizziness, for neuropsychology testing for cognitive symptoms, or for an on-road test with an occupational therapist if there is a question about driving safety. If there are still questions, then referral to a specialist is appropriate.

Answered by: **Dr. Inge Loy-English**

REL PAX (eletriptan hydrobromide) is indicated for the acute treatment of migraine with or without aura in adults. REL PAX is not intended for the prophylactic therapy of migraine or for use in the management of hemiplegic, ophthalmoplegic or basilar migraine. Safety and effectiveness of REL PAX have not been established for cluster headaches, which is present in an older, predominately male population.

For complete prescribing information, please refer to the Product Monograph. The Product Monograph is available upon request from Pfizer Canada Inc., 17300 Trans-Canada Highway, Kirkland, Quebec H9J 2M5

Reference: REL PAX Product Monograph, Pfizer Canada Inc., March 2006

REL PAX[®] 40 mg
eletriptan HBr



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28. When to Restart ASA Therapy After a Gastric Ulcer



How long after a gastric ulcer is treated can a patient who has heart disease restart ASA therapy?

Submitted by: [David Hawkins, MD](#), Kelowna, British Columbia

Even low-dose ASA (*i.e.*, 81 mg q.d.) increases the risk of gastric ulcers and GI bleed two- to four-fold. The risk also increases with age > 60 years, frailty, prior GI bleed, presence of *H. pylori* and concomitant NSAID, warfarin or steroid use.

If the patient develops a gastric ulcer and is on ASA for secondary prevention (known coronary artery disease), low-dose ASA can be continued and a PPI started and continued indefinitely. There is no benefit to substituting clopidogrel for ASA in this setting. Normal platelet function plays an important role in the healing of an ulcer. Clopidogrel inhibits platelet aggregation and delays healing. By decreasing stomach acidity, PPI improve platelet function and significantly decrease the risk of bleeding.

If the patient has a bleeding gastric ulcer, ASA is usually discontinued for three to seven days following endoscopic therapy and restarted if a repeat gastroscopy does not show any high risk features such as a visible vessel or adherent clot. The patient is likely to receive an IV infusion of a PPI for 72 hours and should subsequently remain on the PPI indefinitely.

If, however, the patient has a drug eluting stent deployed in the past year, ASA and clopidogrel should not be discontinued or restarted as soon as possible once bleeding is controlled. A small randomized trial found that patients with CVD and acute bleeding ulcers were more likely to die if ASA was discontinued, with most deaths due to recurrent CV events. The decision regarding discontinuation of antiplatelet drugs in the patient who has an upper GI bleed should be individualized based upon the perceived risk of a cardiac event and the risk of rebleeding following endoscopic therapy.

Resource

1. Bhatt DL, Scheiman J, Abraham NS, et al: ACCF/ACG/AHA 2008 Expert Consensus Document On Reducing The Gastrointestinal Risks Of Antiplatelet Therapy And NSAID Use. *J Am Coll Cardiol* 2008; 52(18):1502-17.

Answered by: [Dr. Bibiana Cujec](#)

29.



An Rh Negative Female with Bleeding

An Rh negative female presents with first trimester bleeding and receives WinRho and settles. If she presents later in the pregnancy with further bleeding at what point will she require another WinRho dose?

Submitted by: **Barry Rieder, MD**, Saskatoon, Saskatchewan

WinRho or RhoGAM are IgG anti-D (Rh) immunoglobulin used in preventing Rh immunization in Rh negative women who are pregnant and may be carrying an Rh positive fetus. The risk of immunization occurs when fetal blood cells enter the maternal circulation (*i.e.*, during miscarriage, abruption or delivery). MICRhoGAM contains sufficient anti-D for 2.5 ml of fetal red cell, usually in the first trimester. The anti-D lasts for 12 weeks and therefore would not need to be repeated within this time. A routine dose would be needed around 28 weeks. In extensive

bleeding associated with abruption, a Beth-Kleihauer test estimates the quantity of fetal cell and the dose of immunoglobulin required. RhoGAM covers 15 ml of blood in the maternal circulation. Another dose of immunoglobulin is given immediately postpartum if there was none given in the previous 12 weeks and the baby is Rh positive.

Answered by: **Dr. Victoria Davis**

30.



β -Blocker Therapy in Heart Failure Patients

In treating congestive heart failure with β -blockers, do you treat heart rate, BP, dose or symptoms?

Submitted by: **Bruce D. Horne, MD**, Burnaby, British Columbia

Heart failure (HF) patients with a left ventricular ejection fraction < 40% should receive β -blocker therapy.¹ When there are no contraindications to β -blockers, they should be initiated at low doses and titrated slowly to optimal dose (over a three month period) based on several factors, including:

- Heart rate (maintained > 65 bpm)
- BP (avoiding symptomatic hypotension with precipitous drops or changes in BP from the patient's baseline BP)

Symptoms of worsening HF such as fluid retention and fatigue are potential adverse

reactions to β -blockers and may warrant adjustment of other medications (diuretics), lowering the dose of β -blocker and occasionally stopping the β -blocker altogether.



Reference

1. Arnold JM, Liu P, Demers C, et al: Canadian Cardiovascular Society Consensus Conference Recommendations On Heart Failure 2006: Diagnosis And Management. *Can J Cardiol* 2006; 22(1):23-45.

Answered by: **Dr. Richard Sheppard**