



*Answers to your questions  
from our medical experts*

## 1. Medical Management of Hyperparathyroidism



**What options exist for medical management of primary hyperparathyroidism in symptomatic elderly patients who are not surgical candidates? Especially: bisphosphonates (ISP, Pamidronate)?**

Submitted by: **J.R. Kamatovic, MD**, Fort Erie, Ontario

Surgery is the only cure for primary hyperparathyroidism and less invasive procedures are becoming more available in many cities across Canada. Medical management occasionally may be acute because of a crisis or deterioration in clinical status and treatment involves intravenous treatment with saline for rehydration and a loop diuretic.

Individuals who may not be surgical candidates can be treated medically. Postmenopausal women can be considered for hormone replacement therapy, which can reduce calcium levels by 0.1 to 0.3 mmol/L. An improvement in bone

mineral density may also occur. Raloxifene may provide similar effects. Intravenous bisphosphonates, such as pamidronate, can provide an acute decrease in calcium levels, but the effect may not last and an increase in parathyroid hormone levels usually occurs. Alendronate in long term studies up to two years in individuals with primary hyperparathyroidism showed a significant improvement in bone mineral density, although calcium levels did not change significantly.

Answered by: **Dr. Vincent Woo**



## 2. Primary Herpes Simplex



**What is the best management for primary herpes simplex virus stomatitis? Do steroids or antivirals have any role in treatment?**

Submitted by: **D. Wildgrube, MD**, Edmonton, Alberta

Primary herpes simplex virus stomatitis is mainly seen in young children. It likely represents the child's first exposure to the herpes simplex virus. The process may be associated with systemic symptoms such as high fevers, or the typical ulcers in the oral cavity and inflammation of the gums. Since the ulcerations are very painful, the child may have difficulty swallowing and will drool. The process usually resolves in seven to ten days without therapy. Acyclovir can be used,

however, since the role of corticosteroids have not been well described in this process, it may be prudent to avoid these agents. Oral topical anesthetics may alleviate the pain, however, they must be used with caution as they may interfere with swelling and normal sensation in the mouth so that the child may bite or burn themselves with hot liquids.

Answered by: **Dr. John Embil**

## 3. Periungual Warts

### ? What is the most effective treatment of periungual warts?

Submitted by: [Janna Bentley, MD](#), Kelowna, British Columbia

Treatment of periungual warts can be difficult because of the variable amount of immunity individuals with warts have to the different subtypes of human papilloma virus (HPV) that cause these warts. Also, periungual warts can often be associated with subungual warts, which are more difficult to treat because of their less accessible location.

It is important when treating periungual warts to avoid treatments causing scarring and to avoid damage to the underlying nail matrix, which can lead to permanent nail dystrophy.

In young children, periungual warts are often treated with reassurance that the infection will clear spontaneously over time as one's immune system produces immunity to HPV. If treatment is desired, keratolytic therapy with salicylic acid can be helpful in reducing the bulk of the warts. More aggressive therapy with cantharidin containing preparations (often in a combination product with podophyllin and salicylic acid) can be tried as these products cause blistering and wart destruction but usually will not produce permanent nail dystrophy.

In adults, cryotherapy with liquid nitrogen is usually the initial treatment of choice as it can be titrated to not produce excessive blistering reactions that could eventuate in permanent nail dystrophy. Cryotherapy can also be helpful for accompanying subungual warts without having to do significant nail removal.

Another option in children and adults is topical immunotherapy with topical sensitizers including diphenylprone and squaric acid dibutylester.

Although off labelled for periungual warts, topical imiquimod can be tried in children and adults. It is limited by lack of penetration in heavily keratinized warts.

For more persistent warts, especially in adults, other options include: intralesional bleomycin, intralesional candida antigen, laser (including pulse dye, erbium, yag and carbon dioxide (CO<sub>2</sub>)) and photodynamic therapy.

Because of the risk of scarring and nail dystrophy, electro-surgery and surgical excision are best avoided. CO<sub>2</sub> laser is also associated with a significant risk of scarring.

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

*Because of the risk of scarring and nail dystrophy, electro-surgery and surgical excision are best avoided.*

### 4. Electroconvulsion Therapy

#### ? What is the mechanism of Electroconvulsion Therapy (ECT) in the Rx of depression?

Submitted by: [Saj Chaudhry, MD](#), Toronto, Ontario

Although ECT use significantly declined with the advent of pharmacological treatments that have less neurocognitive side effects, it remains one of the first-line treatment recommendations for those patients acutely suicidal, psychotic, presenting with severe melancholic depression, or treatment-resistant depression that does not improve after adequate and substantial antidepressant treatment.

ECT is one of the most invasive procedures used by psychiatrists,

yet the mechanisms responsible for its therapeutic effects are not well understood. We know that the generalized brain seizure, and not the electric current, is the central therapeutic event. Currently, it is believed that the therapeutic effects of ECT result from changes in Central Nervous System (CNS) biochemistry and physiology, particularly its actions on monoaminergic transmission.

Answered by: [Dr. Hany Bissada](#)

### 5. Dietary Supplements for Vaginitis

#### ? Are there any proven dietary or supplements that patients can take to reduce “yeast vaginitis”?

Submitted by: [Daniel Ngui, MD](#)

There are several risk factors that may increase the chance of developing yeast vaginitis; these include: antibiotics which alter the protective flora in the vagina; hormonal contraceptives; vaginal contraceptive devices (sponges, diaphragms); weakened immune system (HIV, steroids, chemotherapy); pregnancy; and diabetes. To date there are no proven dietary or supplementary methods that reduce the risk of yeast vaginitis.<sup>1</sup> Indeed, in women with recurrent candidiasis, factors associated with a two-fold increased risk of symptomatic episodes were the

use of panty liners, pantyhose, sexual lubricants, consumption of cranberry juice and acidophilus-containing products.<sup>2</sup>

#### References

- 1 McClelland RS, et al. Prospective Study of Vaginal Bacterial Flora and Other Risk Factors for Vulvovaginal Candidiasis. *J Infect Dis* 2009;199(12):1883-90.
2. Patel DA, et al. Risk Factors for Recurrent Vulvovaginal Candidiasis in Women Receiving Maintenance Antifungal Therapy; Results of a Prospective Cohort Study. *Am J Obstet Gynecol* 2004;190(3):644-53.

Answered by: [Dr. Victoria Davis](#)

## 6. Low Bone Density in Post-Menopausal Women

### ? Is forteo indicated in post-menopausal women who have continued to experience low bone density or fractures, despite bisphosphonates?

Submitted by: *Anonymous*

Changing treatment is not clearly indicated for continued low bone density; bisphosphonates have been shown to decrease fracture risk even if the bone density does not change. However, if bone density continues to fall and new fractures develop while the patient is on bisphosphonates then consideration of alternate therapy is indicated. Forteo (teriparatide) is a recombinant form of parathyroid hormone. It has been shown to increase bone density in patients who previously received bisphosphonates. In one study, patients who had been on bisphosphonates had a 10% increase in lumbar spine bone density after two years of

Forteo. Patients naive to prior treatment with bisphosphonates had an even higher increase of 13%. One study suggested that there is no need for a lag period after stopping the bisphosphonate before starting teriparatide. A common approach for bisphosphonate failure is to treat with teriparatide for 12 to 18 months, followed by re-institution of a bisphosphonate. This sequential treatment has been shown to be particularly effective in increasing and maintaining bone density.

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

## 7. Serum Haptoglobin

### ? What is the significance of serum haptoglobin?

Submitted by: *Josée Martin, MD, St. Jacques, New Brunswick*

Haptoglobin is a glycoprotein synthesized in the liver. Haptoglobin decreases in the blood when it binds free hemoglobin, therefore the serum haptoglobin test is used to detect intravascular or extravascular hemolysis. The haptoglobin level is also decreased by states of ineffective erythropoiesis, such as myelodysplastic syndrome or megaloblastic anemia. As this protein is produced in the liver, levels can decrease with severe hepatocellular dysfunction.

Haptoglobin is an acute phase reactant and the serum haptoglobin level can be elevated (or falsely normal) in conditions such as pregnancy, chronic infections, malignancy, connective tissue disease, or other chronic inflammatory diseases. In these situations, a normal haptoglobin level does not necessarily rule out hemolysis.

A serum haptoglobin level below the reference range (<0.25 g/L) has a sensitivity of 83% and specificity of 96% for detecting hemolysis. An undetectable serum haptoglobin level (<0.07 g/L) is almost always due to clinical hemolysis. This test should be interpreted in conjunction with the Complete Blood Count (CBC) as well as other indicators of hemolysis such as an elevated lactate dehydrogenase and indirect bilirubin.

#### Reference

1. Marchand et al. The Predictive Value of Serum Haptoglobin in Hemolytic Diseases. *JAMA* 1980;243(19):1909-11.

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

## 8. Coenzyme Q10 and Heart Failure

### ? Is coenzyme Q10 useful in heart failure?

Submitted by: **Bob Fredrickson, MD**, Halifax, Nova Scotia

Coenzyme Q10 (also known as ubiquinone) is a fat soluble antioxidant found in high concentrations in the mitochondria of the heart, liver and kidney where it is involved in ATP generation, the primary source of energy for cells. Coenzyme Q10 has been reported to be beneficial in a wide variety of conditions including breast cancer, diabetes, Alzheimer's disease, renal failure, myopathies and cardiovascular diseases.

There is depletion of coenzyme Q10 in the myocardium of patients with heart failure, however, randomized, controlled studies have not shown any benefit of coenzyme Q10 200 mg/day for up to six months on LV ejection

fraction or exercise capacity.<sup>1</sup> Studies were too small to assess for any survival benefit.

Therefore, coenzyme Q10 can not be recommended as a therapy for heart failure. Potential adverse effects include increased bleeding risk, abdominal discomfort, headache, nausea and vomiting.

#### References

1. Khatta M, Alexander BS, Krichthen CM, Fisher ML, Freudenberger R, Robinson SW, Gottlieb SS. The Effect of Coenzyme Q10 in Patients with Congestive Heart Failure. *Ann Intern Med* 2000;132(8):636-40.

Answered by: **Dr. Bibiana Cujec**

## 9. Seborrheic Dermatitis Treatment

### ? What is the fastest and cheapest treatment for seborrheic dermatitis in infants? In adults?

Submitted by: **Larry Bobyn, MD**, Kelowna, British Columbia

The cheapest treatment for seborrheic dermatitis of the skin in infants and adults is 1% hydrocortisone cream BID. It is also the fastest. It works more quickly than using 2% ketoconazole cream BID, which is another option, but more expensive and a slower treatment. For seborrheic dermatitis of the scalp, I would suggest using 2% keto-

conazole shampoo twice weekly. Shampoos containing 1% zinc pyrithione or 2.5% selenium sulfide on a daily basis are two other inexpensive options for seborrheic dermatitis of the scalp.

Answered by: **Dr. Richard Haber**

## 10. Bipolar and Personality Disorder



**Can you recommend aids that can help differentiate between bipolar and borderline personality disorder?**

Submitted by: **E.J. Franczak, MD**, Toronto, Ontario

The most problematic of the personality labels used in patients with mood disorders is borderline personality disorder, usually applied to teenage and young adult women. When features of personality and bipolar disorders coexist, it is good practice to defer Axis II diagnoses and to embark on competent treatment of the mood disorder, particularly if there is a positive family history of bipolar disorders. The problem is that affective disorders in these patients usually conform to bipolar II disorder often complicated by ultrarapid cycling. Recently, lamotrigine has shown promise for such patients. It

is generally preferable to diagnose mood disorders at the expense of personality disorders because giving a borderline diagnosis to a person with bipolar II disorder may lead to a neglect of the mood disorder or, perhaps, half-hearted treatment of the mood disorder.

Reference

1. Rana, Abdul Qayyum, *A Synopsis of Neurological Emergencies*, Chapter 5, Authorhouse: Bloomington, Indiana, USA 2009.

Answered by: **Dr. Hany Bissada**

## 11. Takotsubo Cardiomyopathy



**Following an episode of Takotsubo cardiomyopathy, how long should one remain off work/driving?**

Submitted by: **Ritchie Strachan, MD**, Winnipeg, Manitoba

Takotsubo (stress-related) cardiomyopathy is a transient left ventricular apical ballooning related to a surge of catecholamines from a strong emotional (e.g. death of a spouse), or physiological stressor. It may be complicated by ventricular arrhythmias, emboli from apical thrombus and heart failure. Patients with Takotsubo cardiomyopathy present with chest discomfort, ST elevation and minor troponin elevation in the setting of normal epicardial

coronary arteries. The LV dysfunction typically resolves within two to four weeks. I would recommend that patients remain long term on beta-blocker (risk of recurrence approximately 10%) and return to work and driving four weeks after presentation.

Answered by: **Dr. Bibiana Cujec**

## 12. Insulin Resistance and Sensitivity



**What are insulin resistance and insulin sensitivity?**

Submitted by: **S. Vaidyanathan, MD**, Toronto, Ontario

Insulin resistance refers to the state where tissue such as skeletal muscle, the liver, and fat in particular have a subnormal glucose response/ utilization at a given insulin concentration. In general, these patients have high circulating levels of insulin. Causes of insulin resistance include certain genetic syndromes, obesity, growth hormone excess, glucocorticoids excess states, Type 2 Diabetes Mellitus, pregnancy, stress, and infection.

Manifestations of insulin resistance include Type 2 Diabetes Mellitus, pre-Diabetes, Polycystic Ovary Syndrome (PCOS), hypertriglyceridemia, and acanthosis nigricans. There is also an association with endothelial dysfunction resulting in coronary artery disease. Insulin sensitivity is the exact opposite of insulin resistance and can improve with the correction of states causing insulin resistance.

Answered by: **Dr. Ally P.H. Prebtani**

# 13. Migraine Warnings

## What are red flags for migraines?



Submitted by: [Steve Choi, MD](#), Oakville, Ontario

Migraine in most cases is a unilateral headache, which is described by patients as throbbing or pulsating. This may be accompanied by nausea, vomiting, photophobia, phonophobia or sensitivity to smells. In one third of patients, the pain may be bilateral or switch sides. In most cases, pain is of similar nature in recurrent episodes. In fact, in most cases, patients may be able to feel an impending attack of migraine.

However, certain vascular anomalies or focal mass lesions of brain may cause unilateral headaches. Thus, if there is any change in the pattern of headaches, sudden onset of extremely severe headache, decreased level of alertness, onset of headaches with

physical exertion, orgasm, coughing or sneezing, nuchal rigidity, new onset of headaches over the age of 50, worst headache ever experienced, and headache not fitting otherwise defined pattern, an assessment with brain imaging may be required. Brain imaging, such as CT scan/ MRI and MRA, is helpful to rule out vascular or mass lesions.

History and physical examination play an important role in the assessment of headaches. However, the secondary causes of headaches should be assessed carefully, which may require brain imaging as mentioned above.

Answered by: [Dr. Abdul Qayyum Rana](#)



# 14. Antibiotics for Otitis Media



## How useful are topical antibiotics for otitis media?

Submitted by: I. D'Souza, MD, Willowdale, Ontario

Topical antibiotic preparations are not recommended for otitis media (OM) when the tympanic membrane (TM) is intact. They are commonly used for otitis externa where they are highly effective when used in addition to appropriate conservative measures, such as toileting the ear canal.

Topical antibiotics may be useful for OM in the setting of:

- Acute otitis media (AOM) with perforation of the tympanic membrane
- Post tympanostomy tube otorrhea
- Chronic suppurative otitis media (CSOM)


Several topical antibiotics are ototoxic and this should be taken into account when selecting an agent. Solutions may reach the inner ear via the round window membrane in the setting of a breach in the TM. Ciprofloxacin is not regarded as being ototoxic and is often the antibiotic of choice in this situation. Antibiotic resistance is an increasing issue and overuse or misuse is discouraged.

Aural toilet is critical to achieving success with topical therapy as exudate and desquamated epithelium may impair the passage of drops to the affected area. Some preparations include a corticosteroid, which may be of benefit if there is significant swelling or granulation tissue present.

When the TM is intact, there is no role for topical therapy for OM and systemic antibiotics should be considered in certain cases. Age, previous OM, immunodeficiency, systemic illness and length of symptoms all impact on whether systemic therapy is warranted.

In general, AOM settles within days of spontaneous perforation and topical therapy is not required. If the otorrhea is persistent drops are likely to be effective, however, a sample should be collected for analysis to guide appropriate therapy. Consultation with an ENT specialist is usually not necessary unless this occurs frequently or the otorrhea continues over weeks.

Post tympanostomy tube otorrhea is a common issue and typically is resolved with topical therapy. Specialist opinion should be sought if this is ongoing as the tube may need to be replaced if there is significant colonization.

CSOM is a perforated tympanic membrane with persistent drainage from the middle ear lasting greater than 6 to 12 weeks. The causative bacteria are different than AOM and commonly include *Pseudomonas aeruginosa*, *Staphylococcus aureus*, *Proteus species*, *Klebsiella pneumoniae*, and diphtheroids. Again, a sample should be sent for analysis in order to rationalize antibiotic treatment. Chronic discharge is also associated with cholesteatoma and expert opinion should be sought if there is doubt over the diagnosis or if there is failure to respond to therapy. Drops containing corticosteroids should be considered if granulation tissue is present. Surgery is rarely required to treat CSOM but repair of TM perforations is commonly performed. This is best attempted when the ear is dry. Tympanomastoid surgery is required in the presence of cholesteatoma. 

Answered by: Dr. Ben Dixon