



When to Treat for Eustachian Tube Dysfunction

1.

When do you recommend treating eustachian tube dysfunction?

Question submitted by:
Dr. Roshan Dheda
Bradford, Ontario

The eustachian tube (ET) connects the middle ear cavity with the nasopharynx. The physiologic functions of the ET ventilation or pressure regulation of the middle ear, protection of the middle ear from nasopharyngeal secretions, and sound pressures and clearance or drainage of middle ear secretions into the nasopharynx.

A long-lasting dysfunction of the ET seems to be the cause for development of chronic otitis media (COM) with or without tympanic membrane perforation, otitis media with effusion (OME), and atelectasis of the middle ear. In children with recurrent ear infections or OME, placement of tympanostomy tubes is usually curative.

In older patients, the Valsalva and Politzer manoeuvres are outdated and are rarely used clinically for assessment of ET function. These manoeuvres may be more beneficial in the management of some patients. Nevertheless, the efficacy of these procedures for treatment of middle ear effusion is controversial, and they are not without potential risks. Decongestants and/or nasal steroids are often prescribed for controlling the condition. Allergy consultation is also advised in most patients. Other relatively new, but more aggressive treatments exist but are not widely used. These include:

- Balloon dilation of the cartilaginous ET appears to be beneficial in the treatment of patients with longstanding OME who are unable to perform auto-insufflation of their ET by Valsalva manoeuvre, swallowing, or yawning
- The function of the ET could also be optimized in some patients using laser ablation of the posterior half of the ostium, particularly if pathological findings were present, such as tubal tonsil, narrow orifice of the tubal ostium, hypertrophied adenoids, etc.

Answered by:
Dr. Ted Tewfik



2.

Methylphenidate in the Treatment of Bipolar Disorder

Can methylphenidate be used in the treatment of bipolar disorder?

Question submitted by:
Dr. Reynald Gilbert
Lac-Étchemin, Québec

Attention deficit hyperactivity disorder (ADHD) has been demonstrated to be a risk factor in the development of bipolar disorder with an odds ratio close to statistical significance.^{1,2} In fact, the two conditions share some clinical similarities (e.g., mood regulation, stress intolerance, and hyperactive and impulsive behaviour), making it logical that the gold standard of treatment for ADHD would have a positive impact in patients with bipolar disorder.^{3,4} However, concerns have also been raised that treatment with methylphenidate might destabilize or exacerbate the course of a patient suffering from bipolar disorder, especially as substance misuse is higher, up to three times in the bipolar patient than in the general population.^{5,6} It is also known that patients on methylphenidate may experience manic-like symptoms when taking higher doses of methylphenidate.⁷

In a case series, adult patients diagnosed with bipolar disorder who were experiencing residual depression and/or medication-induced sedation were treated with either methylphenidate or amphetamine.⁸ Results demonstrated that methylphenidate or amphetamine led to moderate clinical improvement in residual depression and/or medication-induced sedation in these patients.⁸ Additionally, a substantial improvement in their health was also observed.⁸

Beyond case reports and case series, there have been a limited number of larger trials that have examined the efficacy of methylphenidate for the treatment of patients with bipolar disorder and comorbid ADHD. An open study in adults found that patients with bipolar I and bipolar II, and mild to moderate depression responded very well to methylphenidate.⁹ However, very little data examining the long-term safety and efficacy of using methylphenidate in patients with bipolar disorder exists.

In conclusion, the limited evidence available suggests that use of methylphenidate to treat residual depression or medication-induced sedation in patients with bipolar disorder may be effective and safe. Clinicians should monitor such patients closely and watch for the emergence of manic-like symptoms as a result of methylphenidate use. In such cases, the stimulant should be stopped and an alternative treatment tried.

References

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Answered by:
Dr. Joel Lamoure
Contributor:
Professor Jessica Stovel

Combining Sitagliptin with Metformin and Insulin

3.

Can sitagliptin be combined with metformin and insulin?

Question submitted by:
Dr. E.J. Franczak
Toronto, Ontario

Sitagliptin is approved to be used either in combination with metformin when glycemic control is inadequate or as monotherapy in patients intolerant to metformin. It is also approved to be used in combination as triple therapy with metformin and sulfonylureas. These are the “official” indications as per the product monograph. [There have been studies in which sitagliptin was used in combination with metformin and insulin in patients with type 2 diabetes and an improvement in glycemic control, decreased weight gain and hypoglycemia, and a reduction in the dose of insulin was seen.](#) Sitagliptin has also been studied in patients with type 1 diabetes, and it has been associated with an improvement in glycemic control and a reduction in the dose of insulin. It is thought that the suppression of glucagon by DDP-4 inhibitors, such as sitagliptin, is the reason for the improvement in glycemic control when insulin is added. Although I do use this combination occasionally, it would be considered an “off label” use, and the pros and cons of off-label use need to be discussed with the patient.

Answered by:
Dr. Hasnain Khandwala



Hepatitis Testing Recommended for Sexually Active Adults

4.

A sexually active 22-year-old with multiple partners (heterosexual) wants STD tests for “all types” of infections. What forms of hepatitis should be checked and what tests should be done?

Question submitted by:
Dr. Aileen Cameron
Ottawa, Ontario

As a general rule, when performing screening for sexually transmitted infections in asymptomatic individuals, testing is only required for hepatitis B. It is uncommon to transmit hepatitis C sexually, and screening is generally not necessary. Exceptions to this would include a partner known or suspected of being hepatitis C virus positive, cocaine or intravenous drug use, or other potentialities for percutaneous exposure to blood. There is also some risk among those with a large number of sexual partners, especially among men who have sex with other men. Hepatitis A is transmitted by the fecal-oral route, and testing is usually only done in the context of clinical illness or suspected contact.

Testing for Hepatitis B is a bit complicated and depends on the ease of organizing repeat visits. HBsAg testing will detect current infection, active or chronic. However, in the weeks or months following exposure, infection may resolve spontaneously, and the antigen may disappear, leading to failure to identify the infectious contact. Testing for Anti-HBc will identify all those with active or past infection. A positive HBc antibody test then requires HBsAg testing to differentiate active infection from past infection. Past (or resolving) infection will result in HBsAg negative and Anti-HBs positive results. These tests can be done sequentially to save lab costs or simultaneously to minimize the number of visits. If the patient is not infected with hepatitis B, it is also useful to get the patient's anti-HBs status, because those who are sexually active, but not immune, should usually be vaccinated.

Answered by:
Dr. Michael Libman

Circumcision for Asymptomatic Phimosis

5.

At what age would you suggest circumcision for asymptomatic phimosis?

Question submitted by:

Dr. Adriana Botha
Morden, Manitoba

An important part of deciding when to operate for phimosis is accurate diagnosis. The foreskin of male infants is normally non-retractile, and it is recommended that parents do not attempt to retract the foreskin of an infant. Physiological phimosis resolves spontaneously but at quite a variable rate, and it is difficult to set an age by which the foreskin would normally be retractile. If phimosis is indeed asymptomatic without associated symptoms, such as obstruction or discomfort while urinating, then there is no urgency in performing a circumcision. In the case of symptomatic phimosis, topical betamethasone or stretching exercises are often successful and can be explored before surgery is considered.

Answered by:

Dr. Michael Rieder



6.

Which hormone contraceptive pill(s) can be used in patients taking antiepileptic drugs?

Question submitted by:
Dr. Yennhi Dang,
Cartier, Québec

Which AEDs Interact with Hormonal Contraceptive Pills?

Antiepileptic drugs (AED) are used to treat seizure disorders, and, increasingly, bipolar disorder, migraines, and neuropathic pain. Some AEDs interact with hormonal oral contraceptive pills (OCP), inducing hepatic enzymes that increase the metabolism of OCPs, thus, decreasing their efficacy. The expected contraceptive failure rate with OCPs is 0.7 per 100 women, and this increases to 3.1 per 100 women with enzyme active AEDs. In general, there is more enzymatic induction associated with older generation AEDs (see Table 1).

Table 1
AED's that May Reduce OCP Effectiveness

- Carbamazepine
- Oxcarbazepine
- Phenobarbital
- Phenytoin
- Primidone
- Topiramate

To counteract these hormonal effects, a higher dose of estrogen OCP with 50 µg of ethinyl estradiol is suggested; or an alternative form of contraception, such as the progesterone IUD, can also be used. A number of AEDs, however, are considered safe with the lower dose OCP (see Table 2).

Table 2
AED's that Do Not Reduce OCP Effectiveness

- Clobazam
- Clonazepam
- Ethosuximide
- Gabapentin
- Levetiracetam
- Pregabalin*
- Sodium valproate
- Valproic acid

* Pregabalin is not approved for seizure disorders in Canada

In contrast, OCPs are known to inhibit the effects of lamotrigine. It is important to know which AED the patient is taking and counsel them accordingly.

Answered by:
Dr. Cathy Popadiuk

Probability of Glaucoma when Treating with Topical Steroids

7.

For eczema on the eyelids in a patient with a family history of glaucoma, what type of cream is recommended?

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

Open-angle glaucoma is a known side effect of topical steroid use on the eyelids. Not all patients will experience this side effect; however, there is a subset of patients who are at particular risk. Risk factors that should be watched for are pre-existing primary open-angle glaucoma, rheumatoid arthritis, diabetes mellitus, a family history of glaucoma, high myopia, and a history of connective tissue disease. [As much as possible, dermatologists prefer to avoid topical steroids on the eyelids, both due to this side effect and the potential for skin thinning.](#) In managing eczema, we will try to optimize topical moisturizers and avoid triggering irritants and allergens. Specific anti-inflammatory benefit can be achieved by using calcineurin inhibitors, such as tacrolimus and pimecrolimus, which do not share either side effect profile with steroids and are, therefore, safe to use in these areas.

Answered by:
Dr. Scott Murray



Lithium Treatment in the Elderly

8.

At what degree of renal impairment should one stop prescribing lithium for an elderly, stable, bipolar patient?

Question submitted by:
Dr. J. Milliken
Bridgewater, Nova Scotia

Lithium treatment is associated with renal side effects, which may vary from mild diabetes insipidus to end-stage renal disease (ESRD).¹ As such, guidelines for the treatment of bipolar disorder recommend monitoring renal function at regular intervals in patients taking lithium.² However, these guidelines often do not address when and how to adjust the lithium dose for a patient who is stable on their current dose but beginning to demonstrate renal impairment secondary to medical or medication impacts on renal function. Elderly patients with a reduction in renal function may be more at risk for renal side-effects of lithium.

Given that lithium is one of the most effective medications for the chronic management of bipolar disorder, we do not want to eliminate it from our medication arsenal due to its potential nephrotoxicity. Monitoring renal function in chronic lithium treatment at least twice yearly may serve as a distant early warning system where the lithium can be stopped before permanent lithium-induced damage occurs.^{1,2} Use of additional nephrotoxic agents (chemotherapeutics, nonsteroidal anti-inflammatories, etc.) may change the frequency of renal monitoring.

Recent studies suggest that patients taking lithium with an estimated GFR (eGFR) < 60 ml/min/1.73m² require more intensive monitoring of their renal function.¹ If the eGFR continues to decrease on subsequent measurements, this signals the need to address lithium therapy.¹

Proactive intervention is essential, since using creatinine to assess renal function before discontinuing lithium may not prevent the eventual requirement for dialysis.³ One study reported that when creatinine clearance was approximately 40 ml/min, renal function improved once lithium was discontinued in five out of seven patients.⁴ However, it was also found that renal function continued to decline in all patients once creatinine clearance was < 25 ml/min and patients remained on lithium.⁴

Hence, once the eGFR is below 60 ml/min, the clinician may want to first try decreasing the lithium dose by 50% and seeing if the patient's mood and renal status remain stable. Once the patient's creatinine clearance starts to dip below 45 ml/min, the clinician may want to consider stopping lithium and starting an alternative mood stabilizer. However, a risk-benefit analysis involving the patient should always be performed to ensure optimal care blending Axis I and Axis III.

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Answered by:
Dr. Joel Lamoure
Contributor:
Professor Jessica Stovel



Treating Skin Lesions Secondary to MRSA

9.

How do you treat people who have occasional skin lesions that are MRSA positive, whether hospital or community-acquired?

Question submitted by:
Dr. Ajike Oladoyin
Calgary, Alberta

The treatment of skin lesions secondary to methicillin-resistant *Staphylococcus aureus* (MRSA) is not different, in principle, from the treatment of lesions caused by “ordinary” methicillin-sensitive *Staphylococcus aureus*, often called (MSSA). However, MRSA, particularly the community-acquired variant, seems more likely to cause skin abscesses, as opposed to more cellulitic lesions most commonly associated with MSSA. There is good evidence that most skin abscesses, whether caused by MRSA or other organisms, often respond well to simple drainage as long as surrounding cellulitis is minimal and there is no significant systemic illness. When an antibiotic is needed, it is best to obtain a culture and use the susceptibility report to guide therapy. Clindamycin is well established as empiric therapy, but resistance is clearly increasing. Cotrimoxazole typically remains sensitive, although it is not a good choice if group A streptococci have not been ruled out as pathogens. Other non- β -lactam agents may also be active, including the tetracyclines and topical mupirocin. Oral linezolid almost never shows resistance, but it is expensive. Of course, a variety of intravenous drugs provide other options for sicker patients. Some patients with MRSA or MSSA have recurrent skin infections. Sometimes, improving basic skin hygiene and treating underlying dermatitis can be helpful. Beyond this, it is common to try to “decolonize” the patient. This has never been demonstrated to be effective, but, anecdotally, many experts believe it is helpful. The exact technique for decolonization is quite variable, but most often involves the use of topical mupirocin to the nose and other colonized sites, as well as regular body washes with an antiseptic soap, such as chlorhexidine. [Some practitioners also add one or two systemic antibiotics. The risks and benefits of various combinations of agents and durations of treatment are not well known and are typically individualized.](#)

Answered by:
Dr. Michael Libman

When to Scope for Adenomas or High-Grade Dysplasia Polyps

10.

On colonoscopy, tubulovillous adenomas or high-grade dysplasia polyps are removed, do we scope in one or three years?

Question submitted by:
Dr. Sylvia Athaide,
North York, Ontario

The most recent guidelines from the Canadian Association of Gastroenterology define an advanced adenoma as a polyp that is greater than 1 cm in diameter or those with either a villous component or high-grade dysplasia, histologically.¹ Given the existence of significant intraobserver variability in the evaluation of these lesions, combined with a general absence of clinical outcomes data within the existing literature, these guidelines recommend that surveillance examination intervals be based on clinical judgement.¹ This is also influenced by histological confirmation of completeness of resection, polyp architecture (*ie.* large, sessile lesions), the presence of multiple adenomas, and the overall quality of the bowel preparation. **As such, recommendations for subsequent surveillance intervals must be determined in comprehensive, case-specific consideration of all of these factors.**

Reference

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Answered by:

Dr. Theodore Xenodemetropoulos



Distinguishing Between Cardiac and Gastro Origins of Chest Pain

11.

With regards to chest pain, how can one distinguish between pain from a cardiac origin and pain from a gastro intestinal origin?

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

Although definitions vary somewhat, noncardiac chest pain (NCCP) is defined as chest pain arising in patients who have normal epicardial coronary arteries, as demonstrated on coronary angiography.¹ It is a common disorder, accounting for up to 5% of presentations to the emergency department.² Several pathophysiological mechanisms have been identified, including acid-related activation of sensory nerve endings within the squamous epithelium in gastroesophageal reflux disease (GERD), visceral hyperalgesia, esophageal motility disorders, abnormal esophageal wall properties, and sensation of visceral stimulation, disrupted autonomic activity, and psychiatric disturbance.^{1,2} Clinical features that may assist in differentiating atypical chest pain of esophageal origin from that of cardiac origin have been proposed, including associated gastrointestinal symptoms (such as heartburn, regurgitation, and dysphagia or deglutination-related precipitation), alleviation of pain with acid suppressing therapy, pain induction by dependent positioning, absence of activity-related correlation of pain provocation, onset of pain, symptoms awakening one from sleep, pain provoked by swallowing, and persistence of pain for hours.² However, these characteristics have ultimately demonstrated poor sensitivity and specificity in the differentiation of the origin of chest pain.² It is, thus, imperative that patients be comprehensively evaluated for a cardiogenic origin of their pain (and that this be definitively excluded) prior to embarking on evaluation for an alternate etiology.

References

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Answered by:
Dr. Theodore Xenodemetropoulos



Latest Treatment Measures for Atopic Dermatitis

12.

What are the latest treatment measures for either atopic dermatitis or eczema?

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

Our approach to atopic dermatitis has changed a bit in the last few years with increasing adoption of the following measure:

1. Increasing use of more specific agents to decrease transcutaneous water loss, such as ceramide-containing moisturizers.
2. Increasing use of bleach in baths to decrease cutaneous *Staphylococcus* colonization.
3. Increasing use of calcineurin inhibitors to decrease topical steroid use and supply better maintenance of atopic skin between disease flares.

Answered by:
Dr. Scott Murray

Inhaled Steroids vs. Oral Steroids

13.

How do respirologists decide to give inhaled steroids vs. oral steroids?

Question submitted by:
Dr. Kathleen Davis
Ottawa, Ontario

In the context of asthma, inhaled glucocorticoids are used for regular therapy while oral glucocorticoids are used for severe exacerbations and, rarely, in very severe asthma not controlled by optimal therapy. As a general rule, regular oral steroids should never be used for asthma that has not been thoroughly investigated by a specialized asthma clinic/program, which should include a respirologist.

In COPD, oral glucocorticoids are used for exacerbations and inhaled glucocorticoids are used only in combination with a long-acting β 2-agonist.

Answered by:
Dr. Robert Cowie