Answers to your questions from our medical experts

1. Echocardiogram for stenosis: How often?

? How often would you perform an echocardiogram on a patient with moderate aortic stenosis who is asymptomatic?

Submitted by:
Frank DeMarco, MD
Windsor, Ontario

Therapeutic decisions about aortic stenosis (AS), particularly those related to surgery, are based largely on the presence or absence of symptoms. This factor determines the frequency of echocardiography in patients.

The rate of progression of AS varies considerably. In patients with moderate AS who are asymptomatic, natural history and indications for surgical intervention do not support the use of annual echocardiographic studies to assess changes in valve area. However, serial echocardiograms are helpful in assessing changes in left ventricular hypertrophy and function. Therefore, in asymptomatic patients with severe AS, annual echocardiogram may be appropriate.

In patients with moderate AS, serial studies performed every two years or so are satisfactory. In patients with mild AS, serial studies can be performed every five years.

Echocardiogram should be performed more frequently if there is change in clinical findings.

Answered by:
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This month's topics:

2. Is chronic wasting disease a concern?

To what degree have wild and domesticated deer and elk been infected by chronic wasting disease? Is there cause for concern? Should the consumption of deer and elk be avoided?

Submitted by:
Gary Barrs, MD
Montreal, Quebec

Chronic wasting disease (CWD) is a prion disease that can affect deer and elk in North America. This condition occurs in both captive and wild animals, but not in domestic ruminants.

The neuropathology of CWD is similar to that of new variant Creutzfeldt-Jakob disease in humans. Evidence exists that CWD is both infectious and contagious, however, the details of transmission remain unknown. It does not appear to be only a feed-borne disease since both captive and free-ranging animals can develop the condition.

The clinical signs of CWD are nonspecific, however, a consistent finding is that of progressive weight loss and behavioural changes in the animal. On microscopic exam of the central nervous system, the spongiform lesions of CWD are similar to those of other transmissible spongiform encephalopathies.

There is no evidence CWD can be transmitted to humans consuming meat or handling infected deer or elk; however, it is recommended hunters discard heads and spinal cords before processing the meat for consumption and submit the heads for CWD screening.

In Canada, all adult deer and elk slaughtered commercially are tested for CWD. If CWD is diagnosed, the affected animal and all of the others in the same herd are destroyed.

Commercial deer and elk with CWD never make it into the food chain and, therefore, the general public has little to fear from this condition.

Answered by:
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3. Is it O.K. to get pregnant while taking sertraline?

A 28-year-old woman has taken 25 mg of sertraline daily for seven years. She wishes to become pregnant. Should there be any concern for her and her potential fetus?

Submitted by:
Stephen Coyle, MD, MBMS, LMCC, CMO
Winnipeg, Manitoba

In a study of 147 women exposed to sertraline in their first trimester, researchers noted no increase in miscarriage, stillbirth, prematurity, mean birth weight or major malformation.[1] Similarly, Hendrick *et al.* noted no increase in congenital abnormalities in 36 women who received sertraline at any point in their pregnancy.[2]

Sertraline is listed as Food and Drug Adminstration Category C, implying there are no well-defined human studies, but there is a concern arising from animal studies. During organogenesis in rats and rabbits with doses 0.5 to four times the maximum recommended human doses, delayed ossification of the fetus was observed. Furthermore, there is concern that sertraline may be associated with increased risk of miscarriage.

Based on the above findings, sertraline should be used in pregnancy only if benefits outweigh potential risks to the fetus. In this particular case, the patient is on a subtherapeutic dose of 25 mg per day, the normal effective dose being 150 mg daily. Any benefit at the current dose is likely due to placebo effect; therefore, it would be best to discontinue the sertraline prior to conception.

References
1. Kulin NA, Pastuszak A, Sage SR, et al: Pregnancy outcome following maternal use of the new selective reuptake inhibitors: A prospective controlled multicentre study. JAMA 1998; 279(8):609-10.
2. Hendrick V, Smith LM, Suri R, et al: Birth outcomes after prenatal exposure to antidepressant medication. Am J Obster Gynecol 2003; 188(3):812-5.

Answered by:
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4. Does chicken pox immunity last?

I read recently that the chicken pox vaccine has a much shorter duration of immunity than anticipated. What is the latest opinion on the duration of immunity expected?

Submitted by:
Robert C. Dickson, MD, CCFP
Hamilton, Ontario

There has been some recent concern regarding waning of immunity post-varicella vaccination. Previous studies from Japan have indicated protection for as long as 20 years. In addition, followup studies of children in the U.S. have revealed protection for at least eight to 11 years. However, these studies were done at a time when there was substantial wild-type virus still present in the community, with the opportunity for boosting of immunity with subclinical infections in already immunized children.

Recent information from the U.S. suggests five years post-vaccination, the incidence of breakthrough disease increases, suggesting either a second primary dose or a booster dose later in life may be required.

The answer as to whether a second shot or a booster is necessary will come from U.S. epidemiologic data—the U.S. began vaccinating in 1995 and they have more experience than Canada.

At present, the National Advisory Committee on Immunization, the Canadian body that provides Health Canada with immunization recommendations, states it is not yet known whether booster doses are necessary after primary vaccination.

Answered by:
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5. Treating depression in teens

With all the concern in the media on antidepressant use in teenagers, which medication is the best choice in a clearly depressed teenager?

Submitted by:
Dennis Glubish, MD, CCFP, FCFP
St. Albert, Alberta

There is no antidepressant approved for teenage depression; therefore, there is no "best choice." The truth of the matter is the quality of data for antidepressant use in this patient population is very poor to nonexistant.

Families and patients should be informed of the risks and benefits of therapy. In situations where antidepressants are deemed absolutely necessary, a selective serotonin reuptake inhibitor could be considered, with Health Canada warnings conveyed to the family.

Answered by:
Roger McIntyre, MD, FRCPC
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6. Botulinum toxin indications

What are the current indications for the use of botulinum toxin?

Submitted by:
Brenda Steinnagel, MD
Hamilton, Ontario

In Canada, botulinum toxin has been approved for use in the following physical or neurologic diagnoses:

- cervical dystonia (spasmodic torticollis),
- blepharospasm (associated with dystonia, including benign essential blepharospasm or VII nerve disorders in patients 12 years of age and older),
- strabismus (children over 12),
- dynamic equinus foot deformity due to spasticity in pediatric cerebral palsy patients, two years of age or older,
- focal spasticity in adults and, most recently,
- in hyperhidrosis of the axilla.

The toxin is also approved for use in glabellar lines associated with corrugator and/or procerus muscle activity.

Off-label uses exist, but there are no clear or defined indications and a physician specialist with expertise should be sought for such problems.

Answered by:
James Filbey, MD, FRCPC (PM & R)
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7. Liver function tests & psychotropic drugs

Many psychotropic drugs affect liver function tests. When should I worry about abnormal results?

Submitted by:
Stephen J. Sibalis, MD, FRCPC
Toronto, Ontario

A search of the medical literature will reveal many, if not all popular psychotropic medications have been reported to be associated with hepatotoxicity. Recent examples include trazodone, fluoxetine, paroxetine and maprotiline, among others.

Features of drug hepatoxicity range from asymptomatic mild elevations in liver enzymes to potentially fatal acute liver failure with hepatic encephalopathy.

It is important to keep in mind that although hepatotoxicity usually occurs within the first few months of commencing therapy, there have been reported cases of antidepressant-associated hepatotoxicity presenting as late as 18 months after therapy is initiated.

If the elevation in liver enzymes, either hepatocellular or cholestatic, are less than twice the upper limit of normal, discontinuation of medication and observation is usually sufficient. Serious abnormalities in liver biochemistry (*i.e.*, alanine aminotransferase and aspartate aminotransferase approaching 10 times the upper limit of normal) or clinical features of serious liver dysfunction (*i.e.*, jaundice, coagulopathy) require discussion with a specialist, as there is no medical treatment aside from withdrawing the offending agent and liver transplant assessment in urgent cases.

Answered by:
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8. What to do about normal calcium & high PTH

What is the clinical significance of elevated PTH in a patient with normal calcium levels and osteopenia?

Submitted by:
Smadar Tourjman, MD, FRCPC
Montreal, Quebec

In this situation, I would first ensure the calcium is indeed normal; if the patient is hypoalbuminemic, one could miss a "corrected calcium" that is actually high, which would then make the diagnosis primary hyperparathyroidism.

If the calcium is truly normal, the high parathyroid hormone (PTH) tells you the body is having to compensate for a disorder of calcium physiology to maintain that normal calcium. This is otherwise known as secondary hyperparathyroidism. Secondary hyperparathyroidism isn't a diagnosis in itself, but rather a name for the physiologic response to whatever is causing a tendency towards low calcium.

The most common situations for this would be renal insufficiency or vitamin D deficiency. These can be assessed by measuring serum creatinine and serum 25-hydroxy-vitamin D (25-OH-D).

If the 25-OH-D is low, dietary deficiency is likely, but be sure to rule out malabsorption states, such as celiac disease. Vitamin D deficiency is not rare in the Canadian population and likely contributes to bone loss and fractures. Most cases of vitamin D deficiency can be diagnosed by directly measuring serum levels, without measuring PTH.

On rare occasions, primary hyperparathyroidism may present with an elevated PTH and a serum calcium at the upper end of normal. In these situations, serial measurements of calcium will usually show hypercalcemia, which then confirms the diagnosis.

Answered by:
Greg Kline, MD, FRCPC
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9. Use of vaginal estrogen

In view of the drastic decline of HRT use, could you comment on the use of vaginal estrogen?

Submitted by:
Gisele Viens, MD, CCFP
St. Claude, Manitoba

There is significant absorption of estrogen from vaginal creams, therefore, those with an intact uterus should have progesterone prescribed at the same time. However, a new product, Vagifem® (vaginal agent tablets), has no vaginal absorption and progesterone does not need to be prescribed to protect the uterus. This agent is excellent for vaginal atrophy and helps some patients with stress incontinence as well.

Note: Please refer to the Canadian Guidelines on the Management of Menopause, 2002, for appropriate treatment approaches.

Answered by:
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10. ACE inhibitor/ARB combinations

Are ACE inhibitors/ARB combinations the appropriate choice in hypertensive patients with proteinuria?

Submitted by:
M.I. Ravalia, MD, CCFP, FCFP
Twillingate, Newfoundland

Adding an angiotensin-converting enzyme (ACE) inhibitor to an angiotensin receptor blocker (ARB) may make sense for some patients, but one should first determine whether all the cardiovascular risk factors have been controlled. If the risk factors have been dealt with and the patient still has proteinuria, it is impotant to think of cheaper alternatives, such as adding a diuretic.

At this point, if the patient still has proteinuria, consider adding an ACE to an ARB.

There is currently a large Canadian study, ONTARGET, looking at high-dose ARBs for proteinuria. The study is ongoing. Dx

Answered by:
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