1. Calcium, Vitamin D, and Cardiovascular Mortality

Do calcium supplements and/or vitamin D increase cardiovascular mortality? If so, should we continue to use them to prevent or treat osteopenia and osteoporosis?

Submitted by: Tat Kwan Wong, MD, Downsview, Ontario

Atherosclerosis results in vascular calcification, and concern has been raised that the use of calcium supplements may result in more rapid progression of atherosclerosis and increased risk of myocardial infarction and stroke. The Women’s Health Initiative Study randomized post-menopausal women to calcium 1,000 mg/day and vitamin D 400 units/day or placebo and did not find any difference in the prespecified clinical end points of myocardial infarctions and strokes. Although some meta-analyses have found a slightly higher rate of myocardial infarctions in patients given calcium supplements, these studies were heterogenous and not specifically designed to assess cardiovascular outcomes. No study has shown increased cardiovascular mortality with calcium and vitamin D supplements.

For the time being, patients who have osteoporosis should be advised to take elemental calcium 1,000 to 1,200 mg q.d. and vitamin D 800 units q.d.

Answered by: Dr. Bibiana Cujec

2. Prenatal Blood Tests

What blood tests are required in early, routine prenatal care?

Submitted by: Roshan Dheda, MD, Bradford, Ontario

Standard, early prenatal blood tests include:

- Blood and rhesus type with antibody screen
- Hemoglobin and mean corpuscular volume (to detect anemia)
- Rubella immunity
- Hepatitis B
- Thyroid function
- Human immunodeficiency virus (HIV), if the patient agrees
- VDRL for syphilis
- Integrated prenatal screen (IPS), if appropriate gestation and the patient is informed and agrees
- Varicella immunity (as the woman may be a candidate for passive immunization if negative and exposed to those with varicella)

Additionally, for those women at risk for thalassemias (Mediterranean, Middle East, South East Asia, and Africa) or sickle cell, hemoglobin electrophoresis should be drawn.

Answered by: Dr. Victoria Davis
Flying or Diving after an Episode of Pneumothorax

How long after an episode of pneumothorax should a patient abstain from flying or diving?

Submitted by: Nevine Audi, MD, Ottawa, Ontario

Air travel and diving represent environmental extremes that carry significant risk to individuals with lung disease. An ongoing pneumothorax is an absolute contraindication to participating in either of these activities. A number of factors affect the assessment of ongoing risk following resolution of an episode of pneumothorax, including the cause of the pneumothorax (e.g., spontaneous, traumatic), presence of underlying lung disease, the manner in which the pneumothorax was treated, and environmental extremes expected to be encountered with planned air travel or diving activities.

Commercial air travel is associated with a hypobaric, hypoxic environment, with cabin barometric pressures at cruising altitude reaching 1,500 to 2,500 meters altitude. Therefore, on the basis of Boyle’s gas law, trapped gas in a body cavity (e.g., closed pneumothorax) can expect to increase in volume by as much as 30%.

A clinical practice guideline has recently been published by the British Thoracic Society (BTS) regarding fitness to fly.1 The risk of recurrence in either lung remains high in individuals who suffer spontaneous pneumothorax for at least one year. Individuals who have not undergone bilateral surgical treatment may want to consider alternative modes of transportation during that period. It is recommended that individuals wait one week after radiographically confirmed resolution of the pneumothorax before flying. Individuals who suffer traumatic pneumothorax that is surgically repaired should wait two weeks to fly. Definitive surgical repair by open thoracotomy or video-assisted thoracoscopic surgery (VATS) markedly reduces future risk of pneumothorax recurrence, even under the stress of air travel.

Diving presents another challenging environmental stress for individuals with lung disease. With every 10 meter descent in sea water, ambient pressure increases by one atmosphere. During a dive, trapped gas in a body cavity is compressed on descent and expands on ascent. Gas expansion and barotrauma (e.g., lung rupture), resulting in pneumothorax or pneumomediastinum can occur during a diving ascent, even in individuals without underlying lung disease or history of a previous pneumothorax. Pneumothorax while diving can have a catastrophic outcome for an individual.

A clinical practice guideline has also been published by the BTS regarding fitness to dive.2 Because of the risk of recurrence, previous spontaneous pneumothorax is an absolute contraindication to diving, unless treated by bilateral surgical pleurectomy by open thoracotomy. In contrast, previous traumatic pneumothorax is a relative contraindication to diving once fully resolved, which would include assessment by pulmonary function tests and chest CT scan. VATS is not considered an adequate surgical approach to reduce risk of pneumothorax recurrence in individuals considering diving. Unfortunately, no guidance was provided regarding the wait time following recovery from surgery before diving could be undertaken.

References

Answered by: Dr. Paul Hernandez
4. The ALTITUDE Study and Add-on Therapies

According to the ALTITUDE study, what is now the best choice for add-on therapy for a diabetic patient already on ACEI or ARB, with persistent microalbuminuria?

Submitted by: Pierre Kugler, MD, Waterloo, Ontario

The Aliskiren Trial on Type 2 Diabetes Using Cardiovascular and Renal Disease Endpoints (ALTITUDE) study looked at the effect of aliskiren, a direct renin inhibitor (DRA), versus placebo on top of an ACE-inhibitor (ACEI) or an angiotensin-receptor-blocker (ARB) in patients with type 2 diabetes and renal impairment. The study was terminated early, since the active-treatment group experienced an increased incidence of nonfatal stroke, renal complications, hyperkalemia, and hypotension over the 18 to 24 months of follow-up. If the patient is already on an ACEI or ARB, it is best to avoid adding a DRA and to avoid combining an ACEI and ARB. The next best choice add-on to an ACEI or ARB for the control of hypertension in this population is either a dihydropyridine calcium channel blocker, thiazide diuretic, or a β-blocker, based on the Canadian Hypertension Education Program (CHEP) guidelines. There is no strong evidence that once blood pressure is controlled, adding additional antihypertensives to either an ACEI or ARB in patients with persistent microalbuminuria improves outcomes.

Answered by: Dr. Ally Prebtani
Winter Allergies

With a patient who suffers from allergies in winter, what allergens or bugs can be pointed at?

Submitted by: Mark D’Souza, MD, Manitoba, Ontario

By “allergies” I assume you mean to say symptoms of allergic rhinoconjunctivitis (i.e., sneezing, rhinorrhea, nasal congestion, ocular discharge, pruritus, and injection). These are the typical symptoms associated with seasonal hay fever, which can affect allergic individuals during the spring (tree, grass, mould season) or late summer/early fall (weed pollen, mould season). However, many patients actually suffer from similar symptoms on a perennial basis due to indoor allergens. These allergens include furred animal dander (cat, dog, rabbit, hamster) and indoor house dust mites (most commonly Dermatophagoides pteronyssinus and Dermatophagoides farinae), in addition to indoor mould exposure. Homes that have a history of basement flooding and those with moisture build-up around windows in winter are at higher risk for mould growth. Dust mite exposure is most relevant in upholstered furniture where indoor dust collects. Sources include carpets, sofas, and, most importantly, bed mattresses and pillows.

Dust mite prevention measures include placement of specialized dust mite impermeable mattress and pillow covers. Bedding should then be washed weekly in hot water. Reduction of indoor humidity to below 40% is often recommended to reduce dust mite and mould levels. Notably, even in the absence of an indoor pet, intermittent exposure to cat dander directly (friends, relatives) and indirectly (kids clothing at school) may contribute to perennial symptoms. However, the pet allergic individual would always benefit from reduced exposure by way of pet removal when necessary.

Finally, the role of irritants cannot be overstated; exposure to indoor tobacco smoke serves to irritate both the upper and lower airways, causing many similar symptoms (cough, nasal congestion, ocular irritation) and exacerbating the effects of a coexisting environmental allergy.

Answered by: Dr. Tom Gerstner
**Experts on Call**

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**6. Sugar Alcohols and Diabetics**

**Are sorbitol/xylitol entirely innocuous in diabetics?**

Submitted by: Jean-Pierre Leung, MD, Calgary, Ontario

Sorbitol and xylitol are sugar alcohols, also known as polyols. Other sugar alcohols are lactitol, maltitol, mannitol, and isomalt. Sugar alcohols do not significantly raise glucose levels. However, there is no evidence that long-term use is safe, and there may be potential side effects. High doses are associated with gas, bloating, and diarrhea.

Answered by: Dr. Vincent Woo

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**7. Complete Work-up for Secondary Hypertension**

**What is the complete work-up if secondary hypertension is suspected?**

Submitted by: Anne Monty, MD, Westmount, Québec

There are many possible causes of secondary hypertension, including renal parenchymal disease and renovascular disease; drugs, such as alcohol and oral contraceptives; steroids and nonsteroidal anti-inflammatory drugs; obstructive sleep apnea; obesity; coarctation of the aorta; and endocrine conditions, such as hyperaldosteronism, pheochromocytoma, Cushing’s syndrome, thyroid dysfunction, and hyperparathyroidism.

All patients with hypertension should have urinalysis and renal function assessment with an estimated glomerular filtration rate. Patients with resistant hypertension should be assessed for other secondary causes of hypertension, including:

- Plasma aldosterone to renin ratio (for hyperaldosteronism)
- 24-hour urine metanephrines (for pheochromocytoma)
- Urine cortisol (for Cushing’s syndrome)
- TSH
- Serum calcium (for hyperparathyroidism)
- Captopril renal scan or MR angiography (for renal artery stenosis)
- Blood pressure measurement in legs (for coarctation)
- Sleep study, if snoring, morning headache, and daytime drowsiness are present

Answered by: Dr. Bibiana Cujec
Diagnosing a Perianal Rash

What is the differential diagnosis of an erythematous macular rash around the perianal region/buttocks?

Submitted by: Ted Xenodemetropoulos, MD, Hamilton, Ontario

The differential diagnosis would depend on the morphology of the cutaneous eruption and symptomatology (pruritic versus nonpruritic); it would also vary in different age groups.

If one considers the most common regional diagnoses, the differential diagnosis would include dermatitis, including an irritant or allergic contact dermatitis. The differential diagnosis would also include a dermatophyte or yeast infection. If there is superimposed scaling, a KOH and fungal culture should be taken. Psoriasis can also be seen in the genital area and could represent inverse psoriasis. In young children, persistent, painful erythema in the perianal area could suggest a diagnosis of perianal streptococcal dermatitis, and a swab should be taken for culture and sensitivity. A persistent erythematous eruption in an older patient requires investigation and may need to be biopsied. Rarely, Bowen’s disease or extramammary Paget’s disease could present with a persistent erythematous eruption in the perianal area. Any persistent eruption, especially if resistant to topical corticosteroids or antifungal creams, should be assessed by a dermatologist.

Answered by: Dr. Richard Haber
Can ASA and clopidogrel be used to replace warfarin in stroke victims, and, if so, under what circumstances?

Submitted by: Peter Nord, MD, Toronto, Ontario

Warfarin, in patients with atrial fibrillation, has been shown to be superior to ASA and is the treatment of choice for atrial fibrillation patients who are at a high-risk for stroke. However, for patients with atrial fibrillation who are not deemed candidates for warfarin therapy, the combination of clopidogrel and ASA may be used; although, there is an increased risk of bleeding with this combination.

Some patients with atrial fibrillation may not be considered optimal candidates for warfarin therapy due to several reasons, including poor INR control, risk of falls resulting in head trauma causing bleeding, drug interactions, preference of the patient, and compliance with the need to monitor INR.

Due to its antiplatelet activity, ASA reduces the risk of stroke by 22% in patients with atrial fibrillation. The combination of ASA and clopidogrel further inhibits platelet activity, causing a significant reduction in vascular events in the setting of acute coronary syndromes; however, the risk of bleeding is increased. Clopidogrel does reduce major vascular events and stroke as shown by the results of the Atrial Fibrillation Clopidogrel Trial with Irbesartan for Prevention of Vascular Events (ACTIVE-A).¹

The primary reduction of vascular events with the combination of ASA and clopidogrel is mainly due to the reduction of the risk of stroke. Although a reduction in myocardial infarction was also seen, it did not reach a statistically significant level. Since the rate of major bleeding was significantly increased from 1.3 to 2% per year, close attention should be paid to the risk of major bleeding in these patients, such as bleeding from the gastrointestinal tract.²

References

Answered by: Dr. Abdul Qayyum Rana and Mr. M.A. Rana
Follow-up Testing for *Helicobacter pylori*

After triple therapy for *H. pylori*, when and how does one test the patient to determine if he or she is free of *H. pylori*?

Submitted by: A. Reyneke, MD, Winkler, Manitoba

The tests for *Helicobacter pylori* are generally categorized into endoscopic and nonendoscopic tests. The endoscopic tests require a biopsy of the stomach and include histologic examination, rapid urease test, and culture. The nonendoscopic tests include serology, urea breath test, and stool antigen test.

The most common endoscopic method for diagnosing *H. pylori* is biopsy for histology. The test has excellent sensitivity and specificity (95% and 98% respectively), especially with special stains like Giemsa or silver stain. It is considered the gold standard for identifying infection, but sampling error can occur, as density and distribution of *H. pylori* can change, especially with antibiotics and antisecretory medications like PPIs.

A rapid urease test is another test that requires a biopsy that is quick, easy, and relatively inexpensive. The advantage of this method is that the test results are known within minutes. There are several urease kits available, but the general principle of the test is to take advantage of the *H. pylori*’s urease activity to hydrolyze urea to ammonia, producing an alkaline pH. From there, a reagent that can detect this pH change is used to identify the presence of the bacteria. The sensitivity of the various kits range from 90 to 95% with specificity of 95 to 100%, but they can be adversely affected by blood in the stomach, PPI use, and antibiotics.

Culturing of the bacteria from biopsy is extremely difficult and is often left to research lab facilities. The bacteria is difficult to grow, because it is fastidious, slow-growing, and requires special media and a particular growth environment. The advantage of culturing the bacteria is that antibiotic sensitivity testing can subsequently be done to guide therapy.

The nonendoscopic test that is most reliable is the urea breath test. Again, the test takes advantage of the urease activity of the *H. pylori* infection to hydrolyze urea tagged with a carbon isotope (typically C-13 or C-14). This isotope is detected in breath samples from carbon labelled CO₂. The sensitivity of the test is 88 to 95% and the specificity is 95%. It is a reliable test for active infection and testing for eradication after therapy.

The best noninvasive test to determine *H. pylori* eradication would be to use the urea breath test six weeks after completing therapy.

Serology testing of *H. pylori* is also a very popular noninvasive test, but it has some limitations. There are many commercially available kits that test for IgG antibodies to *H. pylori*. The advantages of these kits are that they are quick, inexpensive, noninvasive, and sensitive (90 to 100%), but the specificity is lower (76 to 96%), especially if the prevalence of the infection in the area is low. The result is that the negative predictive value is excellent, but the positive predictive value of the test is poor; therefore, a confirmatory test may be necessary. Another disadvantage is that a positive serology can remain positive for months to years, even after successful treatment, making serology testing less than ideal to confirm eradication.

Stool antigen testing is another noninvasive test for *H. pylori*, but it is unavailable in Canada. It is an immunoassay that detects bacterial antigens in stool samples. The sensitivity is 94% and specificity is 97%.

Answered by: Dr. Richmond Sy
ALS Diagnosis and Lyme Serology

Can you please discuss ALS diagnosis and validity of Lyme serology (accuracy)?

Submitted by: Debra De Rubeis, MD, Hamilton, Ontario

Although some patients with amyotrophic lateral sclerosis (ALS) may have positive serology for Lyme disease, there is no consensus about a causal relationship between ALS and Lyme disease. One large US study examining 4,000 patients with ALS showed that only 30 (< 1%) were positive for validated lyme disease serology. Another research study, which examined 414 patients with ALS, showed that only 24 (5.8%) had positive testing for Lyme disease, and only four of these sero-positive patients (0.97%) had a confirmed history of having Lyme disease previously. Such a low incidence of Lyme disease in the ALS patients is similar to the incidence in the general population and does not support any causal relationship between positive Lyme disease serology and ALS.¹

Reference

Answered by: Dr. Abdul Qayyum Rana
Median Neuropathy of the Elbow

How do you best diagnose and treat median neuropathy at the elbow?
Submitted by: Atma Persad, MD, Creston, British Columbia

The median nerve passes across the anterior aspect of the elbow, between the two heads of the pronator teres muscle, and gives rise to the anterior interosseous nerve. Median neuropathy at the elbow may occur due to entrapment between the two heads of the pronator teres, called pronator syndrome. The other site of entrapment is beneath the origin of the flexor digitorum superficialis, where the anterior interosseous nerve is involved, and this is known as anterior interosseous syndrome.

Besides trauma, other causes include anomalous muscles and facial bands. Most patients usually present with gradual onset of aching pain at the proximal forearm or at the elbow on the volar surface. Some patients may report a precipitating event before the onset of symptoms. The pain is usually increased with activity involving pronation. There may be sensory symptoms and weakness in the area of distribution of the nerve. On examination, patients may have some tenderness or swelling at the proximal, volar forearm, and symptoms may be reproduced by applying pressure at the site of compression.

X-rays of the elbow and forearm may help to rule out underlying joint or bone pathology, whereas NCV/EMG is helpful to assess the muscles involved and to detect slowing of the NCV at the elbow, which can help diagnose pronator syndrome.

For pronator syndrome in the absence of weakness, conservative treatments include NSAIDs or steroid injections. In cases of muscle weakness, decompression may be necessary. In case of anterior interosseous syndrome, secondary to trauma or elbow dislocation, close observation for six to eight weeks may be sufficient. However, surgical decompression may be required if there is no improvement.

Resource

Answered by: Dr. Abdul Qayyum Rana
Treatment of Persistent Subclinical Hyperthyroidism

When do we need to start treatment of persistent subclinical hyperthyroidism (i.e., low TSH, but normal free T3 and free T4)?

Submitted by: Philip Ng, MD, Coquitlam, British Columbia

The etiologies are the same as overt hyperthyroidism. Epidemiological studies have shown that in high-risk patients (the elderly, those with pre-existing cardiovascular disease, and post-menopausal women) there is a higher risk of atrial fibrillation, osteoporosis, and death with this condition. However, we don’t know if we can reduce the risk of developing these complications if we treat this condition. Thus, treatment is controversial. Most would recommend treating subclinical hyperthyroidism if the condition is persistent, a definite etiology is found, TSH is undetectable, and the patient is high-risk, as mentioned above. Treatment modalities are similar to overt hyperthyroidism and include antithyroid drugs, radioactive therapy, and surgery.

Answered by: Dr. Ally Prebtani
14. Best Ratio for Assessing Cardiovascular Risk

What ratio is best for assessing cardiovascular risk? We have traditionally relied on body mass index (BMI), but are others better, such as waist circumference, waist-hip, or waist-height ratios?

Submitted by: Grant Campbell, MD, Edmonton, Alberta

Body mass index is the best clinical measure of obesity. I also use the body mass index to give patients an idea of how much weight they should lose (in order to achieve a BMI of 25 kg/m²). The caveat is that BMI overestimates obesity in some very muscular individuals, such as weightlifters and bodybuilders. Asian and South Asian populations have increased cardiovascular risk at lower BMIs than Caucasians, Hispanics, and those of African or Caribbean origin. In Asian populations, overweight is defined as a BMI > 23 to 24.5 kg/m² and obese as a BMI > 25 kg/m² (as opposed to 25 to 29 kg/m² and > 30 kg/m² respectively in Caucasians).

Abdominal obesity is associated with insulin resistance, hypertension, and hypercholesterolemia, and it is a risk factor for coronary artery disease (CAD). A waist circumference of > 88 cm in women and > 102 cm in men increases the risk of CAD. South Asians have more total and visceral fat for the same BMI, and a waist circumference > 80 cm in women and > 90 cm in men is considered abnormal. An increased waist circumference may identify some patients with normal weight (BMI 18.5 to 25 kg/m²) who are at increased risk for cardiac events.

There is no additional benefit to measuring the ratios of waist to hip circumference or waist circumference to height.

Answered by: Dr. Bibiana Cujec
15. Pacemaker Indications

Please discuss the indication for a pacemaker with asymptomatic short runs of ventricular rhythms (i.e., runs of PVCs).

Submitted by: B.L. Chandrarajan, MD, Kingston, Ontario

A pacemaker is generally indicated for symptomatic bradycardia. It is not indicated for ventricular tachycardia or premature ventricular beats, unless these occur because of an underlying bradycardia (e.g., atrial flutter with high-grade atrioventricular block resulting in episodes of polymorphic ventricular tachycardia). Bradycardia or pause-dependent ventricular arrhythmias are often associated with prolonged QT interval. A pacemaker is indicated in patients with pause-dependent ventricular arrhythmias whether or not QT prolongation is present. Often these patients will receive an implantable defibrillator that also has a backup pacing capability.

Answered by: Dr. Bibiana Cujec
Medications for IBS with Constipation

What medications help in treating constipation predominant irritable bowel syndrome (IBS)?

Submitted by: Nafisa Aptekar, MD, Brampton, Ontario

Once the diagnosis of irritable bowel syndrome—constipation predominant (IBS-C) is established by history and appropriate investigations to rule out other causes, the standard treatment includes education (provide an understandable explanation of the disease) and support (including reassurance that the symptoms do exist and are real). The most frequent first line therapy includes recommending a diet high in fibre, typically 20 to 30 g a day. The key is to recommend that you start low and increase slowly (e.g., start at 3 g supplements and increase by 3 g per week until the target amount is met). A thorough dietary history is often helpful to try and eliminate any foods that may increase symptoms.

Laxatives are often the next line of therapy. Osmotic laxatives are the most prescribed class of laxatives (e.g., polyethylene glycol), but they can aggravate the sensations of abdominal pain and bloating. Stimulant laxatives can also be used and are most likely safe but again, can cause abdominal cramping and pain.

A new agent that has just been approved for IBS-C in the United States is lubiprostone. It is a chloride channel activator that stimulates intestinal fluid secretion. Unfortunately, lubiprostone is not yet approved in Canada.

Antidepressants are third line therapy for IBS. The tricyclic antidepressants (e.g., desipramine or nortriptyline) have been useful for IBS, but, as a side effect, they may cause constipation. Therefore, selective serotonin reuptake inhibitors (e.g., paroxetine) may be better for IBS-C.¹

There are also two new agents that are effective in chronic constipation. Linaclotide is a peptide agonist of guanylate cyclase C receptors that has been shown to be effective in improving constipation in randomized placebo controlled trials.² Prucalopride is a highly selective 5-hydroxytryptamine4 receptor agonist also shown to be effective in chronic constipation in women.³ The trials with IBS-C for both agents are still under investigation.

References

Answered by: Dr. Richmond Sy
Migraine Prophylaxis and Botulinum Toxin Type-A

How do we administer migraine prophylaxis therapy with Botulinum Toxin Type-A?

Submitted by: Theo Kemp, MD, Blackfalds, Alberta

Botulinum toxin is indicated for prophylaxis of headaches in adults with chronic migraine. The headaches should occur for at least 15 days per month and last for four hours a day or longer. The commonly used dilution is 200 units per 4 mL or 100 units per 2 mL, with a final concentration of five units per 0.1 mL. For chronic migraine, most experts use a dose of 155 units, administered intramuscularly with a sterile 30 gauge, 0.5 inch needle, with 0.1 mL, or five units, per site. Injections are usually divided across seven specific head and neck muscle areas, which include the frontalis, corrugator, procerus, temporalis, occipitalis, cervical paraspinal, and trapezius. All of the muscles are to be injected bilaterally, with the exception of the procerus. A total of 155 units may be divided as shown in Table 1.

Seeing patients in a follow-up visit four to six weeks after administering treatment is important, not only for monitoring side effects, but also for gauging the patient’s response to treatment.1

Reference

Answered by: Dr. Abdul Qayyum Rana and Mr. M.A. Rana
If the diagnosis of epilepsy is correct, failure to control seizures with one antiepileptic drug (AED) may indicate drug resistant epilepsy. Before considering add-on therapy, one should make sure that the patient is compliant with the current AED and that the serum drug levels are at least in the high-normal range. The dosage of AED can be further increased in most cases, as long as the patient is not showing any signs of toxicity. There is evidence that combining AEDs with different mechanisms of action may further reduce the incidence of seizures. The choice of combining AEDs should be guided by drug interactions and side effect profiles. Among several AEDs that can be used as add-on therapy to phenytoin, clobazam is a reasonable choice. It is a GABA agonist and can be taken once or twice daily, starting at a dose of 10 mg. There are no drug levels available for clobazam and one of the main side effects is lethargy.

Resource

Answered by: Dr. Abdul Qayyum Rana and Dr. M.A. Rana
Inflammation plays an important role in the development of atherosclerosis and plaque rupture. Levels of the inflammatory biomarker, C reactive protein (CRP), correlate with the risk of myocardial infarction, even after adjusting for traditional risk factors. High sensitivity CRP (hsCRP) is able to measure the low levels of CRP found in asymptomatic individuals. However, I very seldom order hsCRP. I assess cardiovascular risk with the Framingham risk score, which incorporates the traditional risk factors, including age, blood pressure, lipids, smoking, diabetes, and family history. The Reynolds risk calculator includes hsCRP in the calculation of risk of cardiovascular events and stroke. It can be used to more precisely define the risk in intermediate-risk patients (10 to 20% 10-year-risk of vascular events) if this will affect management decisions (e.g., initiation of statin).1 Because the risk of vascular disease is low at a young age, I would not recommend testing for hsCRP in patients who are < 40-years-of-age, unless they have very significant risk factors.

Reference

Answered by: Dr. Bibiana Cujec
The optimal way to diagnose endometriosis is by direct visualization of the implants, usually by laparoscopy. If a complete initial evaluation is consistent with endometriosis, empiric medical therapy, without surgical confirmation, is a reasonable and safe approach. However, a satisfactory response to empiric therapy is not a definitive confirmation of the diagnosis. Options for therapy include a three-month trial of continuous combined contraceptive or gonadotropin releasing hormone agonist (GnRH-a).

The optimal treatment of endometriosis depends on the clinical manifestation, which consists of pelvic pain, infertility, and pelvic mass (individually or in any combination). Initial therapy is usually either combined contraceptives (continuous or cyclic) or progestins (oral or intramuscular). If the latter fails after a three-to-six-month trial, GnRH-a, cyclomen, or aromatase inhibitors are the second line of therapy.

Indications for surgery include severe incapacitating or acute symptoms, unresolved or worsening symptoms under medical therapy, advanced disease (e.g., distorted pelvic anatomy, endometriotic cysts, or obstruction of bowel or urinary tract), reluctance to use medical therapy, or an adnexal mass suspicious for malignancy.  

Reference

Answered by: Dr. Victoria Davis