1. Risks/Benefits of Menstrual Suppression

What are the risks/benefits of menstrual suppression?

Submitted by: Gregory Baran, MD, Kingston, Ontario

The "normal cycle" built into OC pills was pharmacological and designed to increase acceptability of the pill. It also provided reassurance that pregnancy did not occur.

There are no particular disadvantages to continuous therapy with the OC pill other than the occasional problem of breakthrough bleeding. Most women become amenorrheic by 10 to 12 months of use. There are no differences in safety or effectiveness between cyclic and continuous or extended regimen OC use. Acceptability of both regimes is high and similar.

Continuous OC use is particularly useful for women who have symptomatic changes associated with menstruation. Suppression of menorrhagia and dysmenorrhea does occur with OCs but both are more effectively managed when the pill is used continuously. While there are no disadvantages in other women, there are no clear advantages either. It should be offered as an option in OC.

For resources, please contact **diagnosis@sta.ca.**

Answered by: Dr. David Cumming

2. The Hallmark Rash of Celiac Disease

What features are there in a patient with confirmed Celiac disease that would characterize the rash often found in this condition? Is dermatitis herpetiformis a standard typical expression, or does it vary in different patients?

Submitted by: Daniel Berendt, MD, Edmonton, Alberta

The hallmark rash with Celiac disease is dermatitis herpetiformis. This is characterized as symmetrical, intensely pruritic, vesicular lesions. They may begin as 2 mm to 3 mm macules and then into blisters. They typically appear on the:

- Elbows
- Buttocks
- Face
- Trunk
- Knees
- Sacrum
- Neck

Rupture of blisters results in rapid relief. It affects 10% to 20% of Celiac disease patients.

Diagnosis may be confirmed by skin biopsy demonstrating the presence of IgA deposits in the dermis, celiac serology (anti-tTG antibody), or small bowel biopsy (almost 100% will have abnormal jejunal mucosa).

A gluten-free diet is the treatment of choice but may take months to be effective. Dapsone may also be used if immediate relief is required.

Answered by: Dr. Robert Bailey; and Chris Teshima

3. Working-Up Asymptomatic Hematuria

How do you work-up asymptomatic hematuria?

Submitted by: D. Kunimoto, MD, Edmonton, Alberta

Asymptomatic hematuria is most commonly detected on routine urinalysis by the reagent dipstick method. The initial approach should involve distinguishing the etiology into one of three categories:

- renal,
- lower urinary tract and
- non-erythyrocyte (false positives).

False positives are caused by red-coloured urine (due to beet ingestion and medications, such as rifampin) or the heme group contaminating the urine (due to red blood cell hemolysis or rhabdomyolysis). The former will be negative for hematuria by the dipstick despite its striking red colour.

Renal causes should be suspected when there is accompanying proteinuria, an abnormal urinary sediment, elevated creatinine and/or systemic signs and symptoms.

Lower urinary tract hematuria is commonly caused by menstruation, urinary tract infections, stone disease and malignancies of the bladder.

A recommended approach to asymptomatic hematuria is outlined in Figure 1.[1]

Reference

1. House A, Cattran D: Nephrology 2: Evaluation of Asymptomatic Hematuria and Proteinuria in Adult Primary Care. CMAJ 2002; 166(3):348-53.

Answered by: Dr. Manish M. Sood

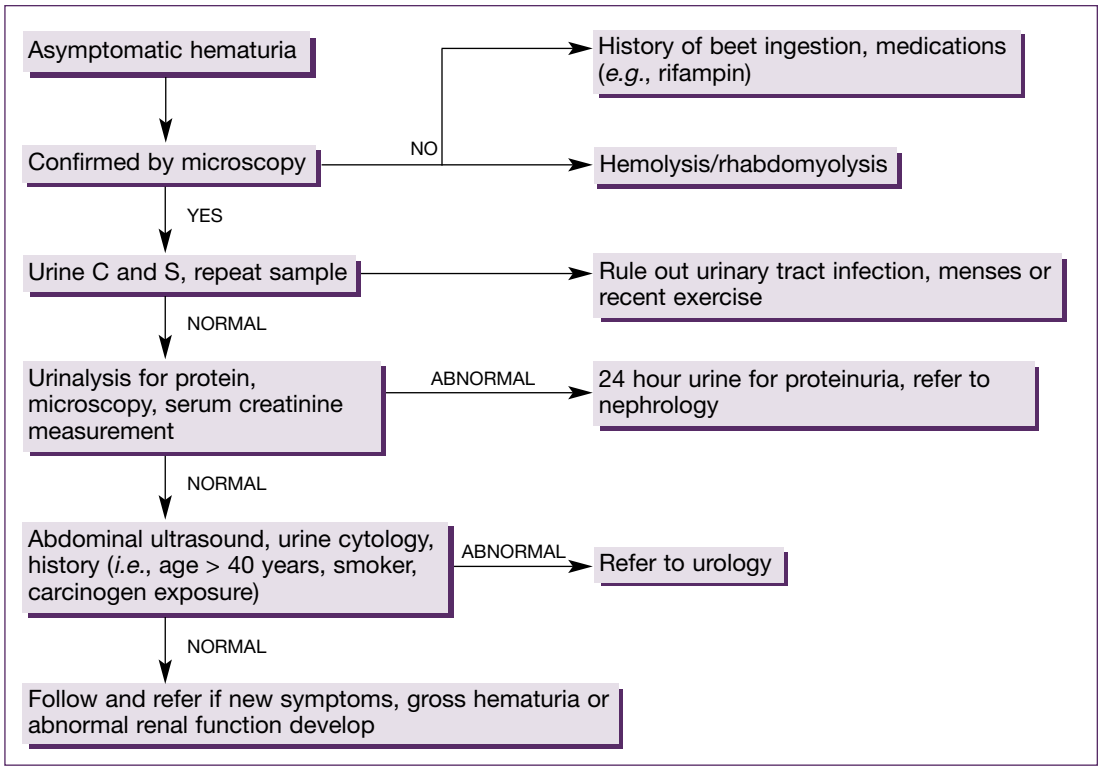

Figure 1. Recommended approach for asymptomatic hematuria.

4. A Quick Look at the Mini-Mental State Exam

? Is the Mini-Mental State Exam (MMSE) truly indicative of the degree of dementia? I have seen patients who score low on it, but function fairly well.

Submitted by: Gayle Garber, MD, Conception Bay South, Newfoundland

Essential in the diagnostic evaluation of dementia are:

- a complete history from someone who knows the patient well,
- physical and neurological examinations, including the use of structural imaging scans (CT or MRI) and
- a mental status examination.

MMSEs should be repeated regularly to assess the degree of the dementia and its progress.

Brief standardized mental status tests (*e.g.*, the MMSE) are useful to quantify the degree of cognitive impairment. However, we should take into consideration that a MMSE does not assess:

- a patient's ability to perform learned complex behaviour (*e.g.*, to dress and undress oneself or to feed oneself), or
- his/her ability to maintain social grace and etiquette.

In that sense, a patient may score low on the MMSE due to some cognitive impairment, but since learned complex behaviour and social grace are still maintained in early dementia, the patient may appear to function fairly well.

Also, MMSEs should be repeated regularly to assess the degree of the dementia and its progress. An elderly patient may score low on a single MMSE due to a delirium that resolves in the next 24 to 48 hours, or due to a temporary cognitive impairment caused by an unfortunate drug interaction that resolves when the offending drug is discontinued.

Answered by: Dr. Hany Bissada

5. Following-Up on Height Loss in Osteoporosis

How much height can a 60-year-old man lose before you investigate him for osteoporosis (OP)?

Submitted by: Steve Sullivan, MD, Victoria, British Columbia

Significant height loss is a risk factor for OP in that it can signal the presence of a vertebral compression fracture. The presence of a vertebral compression fracture is a major risk factor for further fractures and requires additional investigation.

In the 2002 Canadian OP guidelines, there is a recommendation as to when to screen patients. A height loss of > 2 cm in a year or historical height loss of > 4 cm is considered significant and these patients should be followed by thoracolumbar spine radiography to determine the presence of vertebral fractures. If a vertebral fracture is obvious on plain film, patients should be investigated for OP.

The guidelines also state that any vertebral height loss of 20% to 25% is significant and suggests a vertebral fracture. These patients warrant further work-up.

Patients who have lost height in the absence of a vertebral fracture require a complete risk factor assessment. Presence of one major or two minor risk factors would necessitate supplemental investigation. The absence of other risk factors would not necessitate investigation until the age of 65, at which point the patient should be reassessed.

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

6. How Can a Stem Cell Transplant Improve Multiple Myeloma?

How does a stem cell transplant improve a multiple myeloma patient?

Submitted by: Michael Manjos, MD, Jordan Station, Ontario

Progenitor (stem) cell or hematopoietic cell transplantation has been demonstrated to significantly prolong recurrence-free survival and overall survival in multiple myeloma, but does not produce a cure. A decision regarding suitability of transplantation should be made prior to the institution of conventional chemotherapy and factors to consider include:

- patient age,
- extent of disease,
- renal function and
- comorbidities.

Autologous transplantation using cryopreserved peripheral stem cells is often the preferred strategy. In potentially eligible patients, the option of transplantation should be discussed with their treating hematologist oncologist.

Answered by: Dr. Sharlene Gill

7. Hypertension Treatment Threshold for the Elderly

Elderly patients have shown to have increased mortality with the treatment of their hypertension. In a patient with isolated systolic hypertension, who is 80-years-old, what is my treatment threshold?

Submitted by: Fanny Hersson-Edery, MD, Montreal North, Quebec

The Canadian Hypertension Education Program recommends treatment of systolic hypertension if the systolic pressure is > 160 mmHg in healthy, elderly patients.[1] Evidence is less strong for a lower threshold (*i.e.*, > 140 mmHg) in patients with macrovascular target organ damage (*i.e.*, cerebrovascular or coronary artery disease). In elderly patients with diabetes mellitus or chronic kidney disease, treatment is indicated if the systolic pressure is > 130 mmHg; however, the evidence is pretty thin as very few patients in the trials proving the benefits of stricter BP control were > 80-years-of-age.

There is some preliminary, inconclusive data based on a meta-analysis and pilot study that a reduction of BP in the very elderly (who were > 80-years-of-age) may result in decreased strokes but may increase total mortality.[2]

In the frail elderly, the benefits of hypertension treatment need to be balanced against adverse effects (*e.g.*, exacerbation of orthostatic hypotension and falls) before embarking on a strategy of aggressive BP lowering.

Regardless of age, as long as the patient appears to have a reasonable life expectancy, active therapy is probably appropriate if the systolic pressure is > 160 mmHg, with or without an elevated diastolic pressure. Recommended drugs for patients with systolic hypertension are thiazide diuretics, ARBs and long-acting dihydropyridine calcium channel blockers.

References
1. Canadian Hypertension Education Program: Management and Prevention of Hypertension in Canada. http://www.hypertension.ca/chep/docs/2007ScientificSummary.pdf
2. Bulpitt CJ, Beckett NS, Cooke J, et al: Hypertension in the Very Elderly Trial. J Hypertens 2003; 21(12):2409-17.

Answered by: Dr. Bibiana Cujec

8. Is There a Correlation Between Thyroid Disease and Fatty Liver?

Any correlation between thyroid disease and fatty liver?

Submitted by: Jean-Guy Gagnon, MD, Sudbury, Ontario

Thyroid disease can affect multiple organ systems; however, there is no significant correlation between thyroid disease and fatty liver.

Answered by: Dr. Vincent Woo

There is no significant correlation between thyroid disease and fatty liver.

9. Progression to the Development of Mesothelioma

What percentage of patients with silicosis pleural plaques go on to develop mesothelioma?

Submitted by: Mona Lee, MD, North Vancouver, British Columbia

Silicosis is one of a number of pneumoconioses, or occupational lung diseases caused by the inhalation and accumulation of mineral dusts in the lungs. Silicosis results from inhalation of silicon dioxide or silica in occupations such as mining, quarrying, sandblasting or manufacturing of materials like ceramics or glass.[1] The various clinicopathologic types of silicosis are associated with parenchymal lung disease (*e.g.*, silicotic nodules) and hilar lymphadenopathy that occasionally calcify.

However, unlike asbestos exposure, silicosis is not typically associated with pleural disease. Pleural plaques may be indicative of significant exposure to asbestos. Asbestos-related pleural plaques are associated with an increased risk of other complications, such as asbestosis (lung parenchymal fibrosis) and mesothelioma.

Reference
1. Becklake MR, Cowie RL: Pneumoconiosis. In Murray JF, Nadel JA (eds.): *Textbook of Respiratory Medicine*. Third Edition. W.B. Saunders Co., Philadelphia, 2000, pp. 1811-52.

Answered by: Dr. Paul Hernandez

10. Best Treatment for Premenopausal Osteoporosis

What is the best treatment for premenopausal osteoporosis (OP)?

Submitted by: Wendy Rosenthall, MD, Mississauga, Ontario

There is limited data on the treatment of premenopausal OP. Bisphosphonates, standard first-line therapy used in postmenopausal OP, have been shown to be effective in preventing bone loss; however, rodent data on potential fetal toxicity and their long-half life make their use in this population problematic.

In younger patients with bone loss, secondary causes of OP should be carefully investigated. Non-pharmacologic therapy would be considered first-line. Adequate calcium and vitamin D intake, regular weight-bearing exercise, cessation of smoking, maintenance of normal body weight and moderation in alcohol consumption should all be encouraged. This population should have regular BMD monitoring and be considered for initiation of bisphosphonates if there is significant deterioration and a high-risk for fractures.

In older premenopausal women who are osteoporotic, but not planning to become pregnant, treatment and prophylaxis with a bisphosphonate would be recommended as first-line.

Other therapies, such as calcitonin, raloxifene and parathyroid hormone, have not been routinely studied in the premenopausal population.

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

11. A Look at Montelukast

What classifies an adverse reaction to montelukast? Itchiness? What else?

Submitted by: Edward Papp, MD, Edmonton, Alberta

Montelukast is a cysteinyl leukotriene receptor antagonist indicated for the management of persistent asthma in those older than two-years-of-age and, overall, is well tolerated by patients. In contrast to zileuton and zafirlukast, montelukast has not been associated with any clinically significant drug interactions to date.[1]

Clinical trials have not shown a substantive difference in the incidence of adverse effects between those patients receiving montelukast and those receiving placebo.[1] Liver enzymes (alanine aminotransferase and aspartate aminotransferase) were elevated in about 2% of patients, but there was no substantial difference in the frequency of such elevations between those adults,[2] or children[3] receiving active drugs compared to those receiving placebo.

Compared to placebo recipients, patients receiving montelukast in clinical trials had an increased frequency of:

- diarrhea,
- laryngitis,
- pharyngitis,
- nausea,
- otitis,
- sinusitis and
- viral infections.

As with all anti-asthmatic agents, patients taking montelukast should be monitored for signs of Churg-Strauss syndrome if oral corticosteroids are withdrawn. Churg-Strauss syndrome is a rare form of eosinophilic vasculitis. It has been reported during treatment with:

- inhaled sodium cromoglycate,
- nedocromil,
- salmeterol and
- inhaled corticosteroids,
- pranlukast and
- zafirlukast.[1]

Montelukast has also been associated with Churg-Strauss syndrome in adults. However, causality has not yet been established. Typically, this syndrome has emerged after tapering systemic corticosteroids or in patients with a history of systemic corticosteroid use.[1]

References
1. Jarvis B, Markham A: Montelukast: A Review of Its Therapeutic Potential in Persistent Asthma. Drugs 2000; 59(4):891-928.
2. Merck and Co. Inc.: Singulair (Montelukast) Prescribing Information. Merck and Co. Inc. Rahway New Jersey, February 1998.
3. Knorr B, Matz J, Bernstein JA, et al: Montelukast for Chronic Asthma in 6- to 14-Year-Old Children: A Randomized Double-Blind Trial. JAMA 1998: 279(15):1181-6.

Answered by: Dr. Tom Gerstner

Clinical trials have not shown a substantive difference in the incidence of adverse effects between those patients receiving montelukast and those receiving placebo.

12. Hepatic Cysts

Hepatic cysts are commonly seen on ultrasound reports. What is the significance of these? Is there a size where they become more important? Is any treatment needed if they are asymptomatic?

Submitted by: Henry Vlaar, MD, Paris, Ontario

A "cyst" found during an ultrasound most commonly refers to a simple cyst which typically is anechoic, fluid-filled with posterior acoustic enhancement. These cysts are benign and do not require further work-up for liver disease. They are found in an estimated 1% to 5% of the population and can be followed by serial ultrasound every six to 12 months for one to two years to ensure stability and lack of growth. Other cystic lesions include:

- cystadenoma,
- cystadenocarcinoma, or
- hydatid (parasitic) cysts, which have a less benign course.

Cystadenomas and cystadenocarcinomas have malignant potential and hydatid disease may lead to abscesses or anaphylactic shock if ruptured. Overwhelmingly, the natural history of most simple cysts is benign, but rarely, spontaneous hemorrhaging into the cyst, biliary system or peritoneal cavity may occur with larger lesions (*i.e.*, > 4 cm). The presence of septations excludes the diagnosis of a simple cyst and further work-up is required.

Besides hemorrhage, simple cysts may produce abdominal discomfort and early satiety if large or, rarely, jaundice from biliary system obstruction. Progression in size, or the development of symptoms would be reasonable indications for referral.

Answered by: Dr. Phil Wong; and Dr. Min Soo Song

13. Beginning Mammogram Screening

At what age should women begin mammogram screening programs?

Submitted by: Daniel Berendt, MD, Edmonton, Alberta

Women are considered eligible for screening mammography every 12 to 24 months starting at age 40. Selected high-risk women may be considered for mammography before age 40. High-risk is classified as having:

- a strong family history with two or more affected family members,
- prior radiation therapy and/or
- prior childhood malignancy.

Women are considered eligible for screening mammography every 12 to 24 months starting at age 40.

Answered by: Dr. Sharlene Gill

14. Dealing With Chronic Recurrent Yeast Infections

Do you have any advice for chronic recurrent yeast infections in women?

Submitted by: Sanjeev Bhardwaj, MD, Stony Plain, Alberta

Most yeast infections are caused by *Candida albicans (C. albicans)* with little evidence of other species. The vaginal irritation caused by yeast infection can be intense but vaginal irritation can be from other sources (and indeed from local treatments used for yeast infections). Therefore, it is important to make sure that *C. albicans* can be demonstrated by culture. Avoiding irritating chemicals (douches, perfumes, scented soaps, detergents in underwear) and tight clothing and using underwear which is white cotton or at least has a white cotton gusset can relieve symptoms.

The available evidence for the use of probiotics (*lactobacilli*) to prevent recurrent vulvo-vaginal candidiasis is limited. However, the empirical use of probiotics may be considered in women with frequent recurrences.

The use of local therapy may be counterproductive since it can cause irritation as well as remove the original source of irritation.

My approach is to use repeated (three to four cycles) post-menstrual treatments of oral antifungal therapy in women regardless of symptoms and to provide the patient with a prescription for therapy for use at the first sign of trouble. This is effective in many, but by no means all, symptomatic women.

There is almost no useful information in the literature about management of this problem, so treatment frequently becomes a matter of trial and error.

Resource

1. Falagas ME, Betsi GI, Athanasiou S: Probiotics for Prevention of Recurrent Vulvo-Vaginal Candidiasis: A Review. J Antimicrob Chemother 2006; 58(2):266-72.

Answered by: Dr. David Cumming

15. Calcium Supplements for Hypoparathyroidism Patients

How do you determine the dose of calcium supplement for patients with hypoparathyroidism?

Submitted by: Zsuzsanna Kaszas, MD, Kinmount, Ontario

Therapy for established hypoparathyroidism usually consists of calcium supplements and vitamin D or its metabolites, although in some, calcium supplements may be all that is required. Therapy is adjusted to keep the serum calcium in the normal range without causing excess hypercalciuria. Elemental calcium supplements, at doses between 1500 mg and 3000 mg, are usually required and should be adjusted according to laboratory values. There are many types of calcium supplements available and the choice is often made on personal preference. However, regular monitoring is required as fluctuations in stable patients are relatively common.

Answered by: Dr. Vincent Woo

16. Stopping Warfarin Before Dental Surgery

Do we have to stop warfarin in a patient who has had a valve replacement, before dental surgery, on an outpatient basis?

Submitted by: Claude Roberge, MD, Sherbrooke, Quebec

Patients with mechanical valvular prostheses or who have a bioprosthesis and are in atrial fibrillation (AF) require long-term warfarin therapy for the prevention of valve thrombosis and thromboembolic complications. Ideally, warfarin should not be stopped for dental surgery. Warfarin should be adjusted to ensure that the prothrombin time (PT) INR is at the low end of the therapeutic range (*i.e.*, 2.5 to 3.0 for mechanical mitral prosthesis and 2.0 to 2.5 for mechanical aortic prosthesis). Dental bleeding can often be controlled with local use of tranexamic acid, an antifibrinolytic (5% oral solution, 10 mL swirl, hold and spit preoperatively and 10 mL swirl, hold and swallow q.i.d for seven to 10 days following dental surgery).

If the dentist feels that warfarin has to be stopped because of anticipated difficulty controlling bleeding, then the following is recommended:

1. Stop warfarin two to three days before surgery/procedure so that the PT INR is < 1.5 and restart warfarin at the same dose within 24 hours of the procedure
2. If there is high risk of thromboemboli (*i.e.*, mechanical mitral prosthesis or mechanical aortic prosthesis with AF, left ventricular dysfunction or prior thromboemboli), then unfractionated heparin should be started when the PT INR falls to < 2.0, stopped four to six hours before surgery, restarted as early after surgery as bleeding stability allows and continued until the PT INR is again therapeutic with warfarin therapy

Ideally, warfarin should not be stopped for dental surgery. Warfarin should be adjusted to ensure that the PT INR is at the low end of the therapeutic range.

High dose vitamin K (*i.e.*, > 2.5 mg) should be avoided because this precipitates a hypercoagulable state. Fresh frozen plasma is preferable for rapid reversal of anticoagulation with warfarin. Unfractionated IV heparin is preferred over subcutaneous unfractionated heparin or low molecular weight heparin for bridging anticoagulation.

All patients with prosthetic valves require endocarditis prophylaxis prior to dental procedures. This has not changed with the new endocarditis prophylaxis guidelines.

Resources

1. ACC/AHA 2006 Guidelines for the Management of Patients with Valvular Heart Disease: A Report of the American College of Cardiology/American Heart Association Task Force on Practice Guidelines (Writing Committee to Revise the 1998 Guidelines for the Management of Patients with Valvular Heart Disease) Developed in Collaboration with the Society of Cardiovascular Anesthesiologists Endorsed by the Society for Cardiovascular Angiography and Interventions and the Society of Thoracic Surgeons. J Am Coll Cardiol 2006; 48(3):598-678.
2. Wilson W, Taubert KA, Gewitz M, et al: AHA Guidelines on Prevention of Infective Endocarditis. Circulation 2007; 116(15):1736-54.

Answered by: Dr. Bibiana Cujec

17. Citalopram vs. Escitalopram

What is the difference between citalopram and escitalopram in regards to side-effects?

Submitted by: Raouf Dimitry, MD, Lachine, Quebec

Both drugs exert their therapeutic efficacy as antidepressants by inhibiting the reuptake of 5-hydroxytryptamine into the presynaptic serotoninergic nerve terminal. Escitalopram (the S-enantiomer of racemic citalopram [containing a mixture of both R- and S-enantiomers]) was developed, in part, based on the observation that (in animal studies) the R-enantiomer, which is devoid of antidepressant properties, is anxiogenic and that the pure S-enantiomer preparation might display improved tolerability compared to citalopram which already has a favourable tolerability profile.

Controlled studies comparing citalopram with escitalopram are few. However, recently Kennedy, *et al*[1] performed a meta-analysis of nine studies with escitalopram and concluded that escitalopram might be slightly more effective than citalopram.

For reference, please contact **diagnosis@sta.ca.**

Answered by: Dr. Hany Bissada

18. Treating Tenosynovitis

Would you treat tenosynovitis as you would rheumatoid arthritis, or let nature take its course?

Submitted by: Raouf Dimitry, MD, Lachine, Quebec

Tenosynovitis (inflammation of the tendon sheath) is usually either inflammatory or mechanical in origin.

In the setting of an inflammatory polyarthritis, such as rheumatoid arthritis, the treatment of tenosynovitis would be the same as the treatment of the other joints involved. Should there be isolated and persistent tenosynovitis, despite generally good control of the arthritis, then the management outlined below would be appropriate.

Acutely, rest and immobilization should be first-line. Patients should be advised to reduce repetitive movements which exacerbate symptoms, such as gripping in the setting of a flexor tenosynovitis. Ice to the affected area may also reduce pain. Patients can also be fitted for hand splints, (*e.g.*, in De Quervain's tenosynovitis). NSAIDs may also provide some relief.

If symptoms persist beyond a few weeks, then a local corticosteroid injection may be beneficial. A repeat injection after six weeks, if there is no relief from the initial injection, may be tried before referral for surgery.

Patients who have persistent symptoms despite immobilization, rest and local injection, can be referred for surgical management and release of the tendon sheath, which has been shown to be very effective.

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

19. Is it Necessary to Follow-Up with an Oncologist?

Should all patients with surgically cleared cancers (*i.e.*, lung and colon—not breast) see an oncologist for follow-up?

Submitted by: Dr. Zsuzsanna Gabor, MD, Scarborough, Ontario

No. Typically, follow-up for resected solid tumour malignancies is undertaken by the primary care physician. In selected cases, for instance young patients with a very high risk of relapse, follow-up may be directed by their oncologist in the hopes that this may facilitate earlier detection of potentially salvageable metastatic relapse, although there is no evidence to support this practice.

Answered by: Dr. Sharlene Gill

20. How High is Too High for Creatinine?

How high is too high for creatinine and ACE inhibitor use in congestive heart failure (CHF)?

Submitted by: Rosemary Christinck, MD, Pembroke, Ontario

Patients with CHF syndrome, with reduced systolic left ventricular function or ejection fraction, are at high risk of recurrent hospitalization and premature mortality.

In numerous large scale clinical trials, ACE inhibitors have been shown to significantly reduce the risk and improve the functional capacity and quality of life of CHF patients. Therefore, ACE inhibitors should be offered to all patients without a specific creatinine cutpoint.

ACE inhibitors should be offered to all CHF patients without a specific creatinine cutpoint.

Most CHF patients will tolerate the ACE inhibitor, albeit with some downward adjustment of other medications at times, particularly the dose of diuretics needed. Baseline creatinine should be recorded and repeat creatinines should be obtained with each ACE inhibitor dosage adjustment. Expect up to a 30% increase in creatinine resulting from the ACE inhibitor induced reduction of intraglomerular pressure, which is paradoxically actually nephroprotective and indicates that the ACE inhibitor is being absorbed and is working. Greater elevations of serum creatinine should invoke the possibility of bilateral renal artery stenosis and lead to a discontinuation of the ACE inhibitor and an appropriate work-up of the patient. Dx

Answered by: Dr. George N. Honos