1. Treating mild asthma in adults

Is montelukast (Singulair®) recommended for the treatment of mild asthma in young adults, even if the patient is already using salbutamol (with or without beclovent)?

Submitted by:
David Grunbaum, MD, FRCPC
Lachine, Quebec

The soon-to-be-published, updated Canadian asthma guidelines recommend that inhaled corticosteroids (ICS), at a dose of 200 mcg to 400 mcg per day of beclomethasone or equivalent, should be the initial treatment for mild asthma in adults. However, if a patient has strong concerns regarding ICS, the guidelines suggest a trial of a leukotriene receptor antagonist (LTRA), such as montelukast, be considered; the effectiveness of such a trial should be monitored closely.

In a recent review of 13 trials comparing the impact of ICS to a LTRA in "mild" asthma, it was found that patients treated with the LTRA had poorer symptomatic control, were much more likely to be withdrawn from the studies due to poor asthma control, and were 60% more likely to suffer an asthma exacerbation. However, the mean FEV_1 in these trials ranged from 66% to 84% predicted, suggesting the asthma severity was probably not truly "mild."

Although LTRA's are not indicated as an alternative to ICS for moderate asthma, there is good evidence that the addition of an LTRA to ICS can bring about improvement in asthma control in subjects who are not fully controlled by ICS alone. The addition of an LTRA may be an alternative to doubling the dose of ICS in asthmatics already on low-dose ICS.

In patients who only seem to have exertion-induced bronchoconstriction (EIB), or in patients in whom EIB is a persisting problem despite treatment with ICS, the use of an LTRA may also be beneficial.

In general, if asthma symptoms persist despite the use of ICS, it is prudent to closely investigate the reasons for the poor asthma control before considering additional drugs. Reasons may include non-adherence with medication and the possibility that some, or perhaps even all, of the symptoms could be due to something other than asthma.

Answered by:
Rick Hodder, MD, MSc, FRCPC
Professor, University of Ottawa
Ottawa Hospital-Civic Campus
Ottawa, Ontario

More Q&As on page 24 →

This month's topics:

2. The role of BNP in managing CHF

What is the role of blood B-type natriuretic peptide (BNP) levels in the management of congestive heart failure (CHF)

Submitted by:
Greg Karaguesian, MD
Haliburton, Ontario

In recent trials, blood BNP level was found to be useful in distinguishing cardiac from non-cardiac causes of dyspnea in patients presenting to the emergency department (ED). A cutoff level of > 100 pg/mL has a high negative predictive value and good specificity in diagnosing CHF. Slightly elevated levels (100 pg/mL to 400 pg/mL) may also be found in certain lung conditions (*e.g.*, pulmonary embolism) and renal failure, but levels > 400 pg/mL almost always indicate CHF. BNP is more predictive than either clinical exam or other laboratory studies.

Besides being an initial diagnostic tool, BNP may also be useful in following the response to treatment of CHF. The level of BNP seems to correlate with the severity of CHF and survival.

A recent study showed that the BNP assay used in the ED is effective, safe, and decreases unnecessary hospitalizations for suspected CHF.

The BNP assay is not meant to replace, but rather to supplement the clinical history, physical exam, and chest X-ray.

In Canada, no guidelines on the use of BNP have yet been published.

Answered by:
Michael Chan, MD
Associate clinical professor of medicine, University of Alberta
Co-director, Heart Function Stabalization Program
Royal Alexandra Hospital
Edmonton, Alberta

3. How to avoid missing a prostate cancer diagnosis

What is the best way not to miss a prostate cancer diagnosis?

Submitted by:
Raquel Vary, MD
Montreal, Quebec

The diagnosis of prostate cancer can be confusing, as different individuals and groups vary greatly with their recommendations.

When evaluating a man with voiding symptoms, the American Urologic Association suggests performing a digital rectal exam (DRE) and a prostate-specific antigen (PSA) if a diagnosis of prostate cancer will impact the care of the patient. As well, a patient with a strong family history of prostate cancer should also be evaluated with a DRE and PSA, with many suggesting this be started when the patient is 40.

The DRE is an important part of the evaluation of prostate cancer; up to 25% of new cancers are diagnosed on DRE abnormalities alone.

Up to 25% of new cancers are diagnosed on DRE abnormalities alone.

Total PSA lacks accuracy, especially with values < 10 ng/mL, but remains the most commonly used test to evaluate for prostate cancer. The test characteristics can be improved by reviewing the rise of PSA over time and taking the level of PSA in the context of the patient's age. Evaluation of the different molecular forms of PSA can also be useful in improving the specificity of the test.

Screening of asymptomatic men remains controversial, as there is no good evidence that screening has affected prostate cancer mortality. However, screening has led to a significant migration to earlier stages of cancer, when it can be treated for cure. The Canadian Urologic Association suggests men over 50 be informed about the possible pros and cons of PSA testing.

Answered by:
Robert Siemens, MD, FRCSC
Assistant professor, Queen's University
Kingston, Ontario

4. What to know about hypothyroidism

A patient is diagnosed with hypothyroidism. Blood work shows decreased thyroid-stimulating hormone (TSH), but maximal free thyroxine. The patient is asymptomatic. Should I decrease the thyroxine?

Submitted by:
Shanthy Sundar, MD
Amherst, Nova Scotia

Hypothyroidism is common: 2% of women and 0.5% of men in the U.S. have clinical evidence of the condition. A mid-normal TSH should be the target of treatment in hypothyroid patients. This is relatively easy to achieve with the current wide range of thyroxine dosages.

TSH determinations should be left until six weeks following a dose adjustment, since the pituitary takes some time to attain a new steady state on a given thyroxine dose.

It would be better to know the lab values for the patient in question. I am not sure if decreased TSH means just below lower normal range or suppressed levels (< 0.03 with third-generation TSH assay). It would also be necessary to know when the last dosage start/change was made.

Variable compliance causing erratic levels should also be considered in this case. Assuming the blood test was checked at appropriate intervals after dosage change and there are no compliance issues, this may depict mild iatrogenic hyperthyroidism, which could happen during any thyroxine replacement. A decrease in thyroxine dosage is required, with repeat levels checked as mentioned above (assuming patient has no hypopituitarism).

Replacement therapy should be decreased until TSH is normal. Thyroid hormone replacement therapy should not be given in doses that suppress TSH below the normal range. TSH should be monitored annually in patients on thyroid replacement.

Answered by:
Usman Chaudhry, MD, FACE
Faculty, Dalhousie University
Endocrinologist, Moncton Hospital
Moncton, New Brunswick

5. Managing belated hypertriglyceridemia

What is the best management of belated hypertriglyceridemia?

Submitted by:
Tim Brandys, MD, FRCSC
Ottawa, Ontario

I'm not familiar with the term "belated" hypertriglyceridemia, but if you are referring to persistent or very high triglyceride levels, be sure to rule out secondary causes of hypertriglyceridemia. Particularly common are undiagnosed or uncontrolled diabetes, alcohol excess, hypothyroidism, nephrotic syndrome, and some drugs (*e.g.*, estrogen replacement, tamoxifen, steroids, cyclosporine, high-dose thiazides). Obesity and the metaboloic syndrome are increasingly common causes. Also, check for a history of familial hypertriglyceridemia or other lipid disorders.

The most common "error" in the management of hypertriglyceridemia is the use of steadily increasing doses of statins. Most statins have only a modest effect on triglycerides and, at higher doses, may even start reducing HDL levels.

Weight loss, avoiding alcohol excess, and exercise can help. A diet rich in omega-3 fatty acids can also help reduce triglycerides.

Nicotinic acid can be used, but may exacerbate glycemic levels in people with diabetes. Addition of insulin can also drop triglyceride levels nicely.

Fibrates are the most potent class of drugs for hypertriglyceridemia. Combination therapy is often required, but recall there is an increased risk of rhabdomyolysis with the statin/fibrate combination. Either use pravastatin or choose a lower dose of the statin when using the combination. D_x

Answered by:
Steve Wong, MD, FRCPC
Program director, community internal medicine
Department of medicine
University of British Columbia
Vancouver, British Columbia