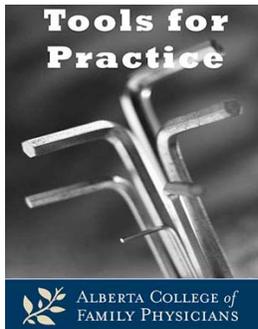


Schedule Change to Tools for Practice (TFP)!

TFP will be circulated every 3 weeks for the months of April, May and June. Look for the next TFP to be sent to you on May 22, 2012.

Tools for Practice is proudly sponsored by the Alberta College of Family Physicians (ACFP). ACFP is a provincial, professional voluntary organization, representing more than 3000 family physicians, family medicine residents and medical students in Alberta. Established over fifty years ago, the ACFP strives for excellence in family practice through advocacy, continuing medical education and primary care research. www.acfp.ca

April 30, 2012



Which is the best puffer for initial therapy in COPD?

Clinical Question: Which puffer has the greatest impact on clinical outcomes as the first-line long-acting inhaled treatment for COPD?

Evidence:

Long-Acting Beta-Agonist (LABA) versus Tiotropium (Spiriva®): 2 publications:

- POET¹, one year trial, 7384 patients, comparing tiotropium 18ug QD versus salmeterol 50ug BID.
 - Tiotropium (over LABA) had statistically significant improvements in
 - Exacerbation rates 0.89 (0.83-0.96).
 - Patients with ≥ 1 exacerbations: 34% versus 39%, Number Needed to Treat (NNT) 19.
 - No difference in mortality or quality of life.
- Two 6-month trials combined,² 1207 patients, comparing tiotropium, salmeterol and placebo.
 - No statistical difference between tiotropium and salmeterol or salmeterol and placebo.
 - Tiotropium was statistically significantly better than placebo,
 - Clinically important improved quality of life NNT 11.
 - Reduced hospitalization NNT 10.
 - Tiotropium produced more mouth dryness than salmeterol (8.2% vs 1.7%)

LABA & steroid versus Tiotropium:

- INSPIRE3, 2-year trial, 1323 patients, comparing salmeterol/fluticasone 50/500ug BID versus tiotropium 18ug QD.
 - No statistical difference in exacerbations and no clinical difference in quality of life.³
 - While there were differences in some secondary outcomes, drop-out was high (39%) and no outcome data was collected on drop-outs.
 - Cochrane review felt the results were unreliable.⁴

LABA versus Steroid:

- Cochrane review (7 studies, 5997 patients).⁵
 - No difference in exacerbation and no clinical difference in quality of life.

- Steroids caused more pneumonia and approached statistically significant increased mortality (Odds Ratio 1.17; 95% CI 0.97 to 1.42).

Context:

- Trials 1-3 were industry funded.¹⁻³
- Inhaled steroids appear to have increased risk of pneumonia, Number Needed to Harm (NNH) 13-47⁶⁻⁹ and fractures NNH 83 over 3 years¹⁰
- Recent guideline¹¹ recommends LABA or tiotropium as initial therapy.
 - Unfortunately, POET was too recent for inclusion.

Bottom-line: The available evidence indicates that tiotropium is likely the best initial long-acting therapy for COPD, followed by a LABA (like salmeterol).

Authors: G. Michael Allan MD CCFP, James McCormack BSc(Pharm) Pharm D

1. N Engl J Med 2011; 364(12):1093-103.
2. Thorax 2003; 58:399-404. [Erratum, Thorax 2005; 60:105.]
3. Am J Respir Crit Care Med. 2008; 177:19-26.
4. Cochrane Database Syst Rev. 2010 May 12; (5):CD007891.
5. Cochrane Database Syst Rev. 2011; 12:CD007033.
6. N Engl J Med. 2007; 356:775-89
7. JAMA. 2008; 300(20):2407-2416
8. Arch Intern Med. 2009; 169(3):219-2294)
9. Cochrane 2007 Oct 17; (4):CD003794.
10. Thorax 2011; 66(8):699-708.
11. Ann Intern Med. 2011; 155:179-191.

Tools for Practice is a biweekly article summarizing medical evidence with a focus on topical issues and practice modifying information. It is coordinated by G. Michael Allan, MD, CCFP and the content is written by practising family physicians who are joined occasionally by a health professional from another medical specialty or health discipline. If you are not a member of the ACFP and would like to receive the TFP emails, please contact subscribetfp@acfp.ca to be added to the distribution list. Archived articles are available on the ACFP website.

This communication reflects the opinion of the authors and does not necessarily mirror the perspective and policy of the Alberta College of Family Physicians.