Less puffing, more breathing? Intermittent inhaled steroids for asthma

Clinical Question: In patients with mild persistent asthma, is intermittent use of inhaled corticosteroids (ICS) as effective as daily use?

Bottom Line: In patients with mild persistent asthma, intermittent use of ICS or ICS/LABA is similar to daily ICS in preventing exacerbations but is associated with ~5 fewer weeks per year of well-controlled asthma. Overall adverse events are similar.

Evidence:

- Focusing on two large (~4000 patients each), industry managed, randomized, double-blind, placebo-controlled trials (RCTs) in mild persistent asthma (controlled on low-dose daily ICS or uncontrolled with Short-Acting Beta-Agonist alone). Mean age ~40; ~20% had severe exacerbation in preceding year. Included patients randomized to budesonide/formoterol PRN or budesonide 200mcg BID + terbutaline PRN after a 2-4-week run-in of terbutaline only. Outcomes at 1 year (study results combined when similar outcomes reported):
  - Patients with ≥ exacerbation:
    - Severe exacerbations (oral steroids, hospitalization or emergency department visit with systemic corticosteroids): Budesonide/formoterol PRN 7.4%, daily ICS 7.8%: not statistically different.
    - Moderate to severe exacerbations:
      - Budesonide/formoterol PRN 10.3%, daily ICS 11.2%: not statistically different.
  - Symptoms:
    - Asthma Control Questionnaire-5 (ACQ-5): nighttime waking, symptoms on waking, activity limitation, shortness of breath, wheeze:
      - Proportion with improvement of ≥ 0.5 points (minimally clinical important difference): Budesonide/formoterol PRN 41%, daily ICS 46%, Number needed to harm (NNH)=20.
      - Number of weeks with well controlled asthma: Budesonide/formoterol PRN 18 weeks versus 23 weeks.
      - Asthma Quality of Life Questionnaire: no clinically meaningful difference.
    - Adverse events: similar.
    - Total ICS exposure was 60-70% lower with intermittent treatment.
- Previous systematic review (6 RCTs; 1211 children and adults) of intermittent versus daily ICS (excluded ICS/LABA combination trials) found:
  - No difference in risk of exacerbation.
  - Fewer asthma-controlled days with intermittent versus daily ICS.
For children: daily ICS resulted in ~0.5cm less growth (height) at ~1 year.¹

Context:

- Up to 75% of asthmatics have mild asthma.⁴
- Guidelines recommend daily ICS for mild persistent asthma,⁵ but only ~50% adhere.⁶
- Intermittent ICS or ICS/LABA use, compared to daily ICS, results in less overall steroid use¹,² and potential cost savings.⁷,⁸

Authors:
Nicolas Dugré PharmD MSc & Michael R. Kolber MD CCFP MSc

Disclosures:
Authors do not have any conflicts of interest to declare

References:

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. Each article is peer-reviewed, ensuring it maintains a high standard of quality, accuracy, and academic integrity. If you are not a member of the ACFP and would like to receive the TFP emails, please sign up for the distribution list at http://bit.ly/signupfortfps. 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.

Earn up to 70 certified credits with the new and improved GoMainpro! Find out more!

GoMainpro allows you to earn certified Self-Learning Mainpro credits on the entire Tools for Practice library by launching a reflective exercise attached to the specific
The ACFP and its Chapter partners are happy to offer member pricing on GoMainpro subscriptions. Enter the chapter-specific promo code **A1C2F** to receive member pricing.