



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).^{1,2} 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):^{1,2}
 - Budesonide/formoterol PRN 7.4%, daily ICS 7.8%: not statistically different.
 - Moderate to severe exacerbations:¹
 - 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):^{1,2}
 - 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.¹
 - Asthma Quality of Life Questionnaire: no clinically meaningful difference.^{1,2}
 - Adverse events: similar.^{1,2}
 - Total ICS exposure was ~60-70% lower with intermittent treatment.^{1,2}
 - Previous systematic review³ (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.³

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 use^{1,2} and potential cost savings.^{7,8}

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Disclosures:

Authors do not have any conflicts of interest to declare

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