

Do Inhaled Corticosteroids Affect Growth?

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Asthma occurs in 9% of the US population, with a lifetime prevalence of 13%. Inhaled corticosteroids are first line treatment for persistent asthma in children. Parents are often concerned about the effect of inhaled corticosteroids on growth; most often discussed is a concern in regards to final adult height. Previous studies have shown a growth reduction of 0.5-3 cm during the first 1-2 years of therapy and no difference in final adult height. An extensive review of the literature was completed to determine whether or not inhaled corticosteroids affect growth. PubMed, PubMed Clinical Queries and Cochrane Database were searched using keywords "inhaled corticosteroids" and "growth." Four studies were found which addressed the PICO question. The studies' format consisted of two prospective cohort studies, one randomized, double-blinded placebo-controlled study and one systematic review. They all had study-specific limitations, including lack of comparison group, a large number of patients lost to follow-up and an unclear description of patients lost to follow-up. Two of the four studies showed no growth delay or diminished growth velocity in patients receiving inhaled corticosteroids (Arend et al, Bensch et al). One of the studies showed a lower final adult height, most evident in the 5-8 year old females (Kelly et al). However, this particular study was questioned as to whether these results were clinically significant or not. The final study, which was the systematic review, showed anywhere from 0.7cm to 1.6cm loss of adult height, which we deemed not clinically significant (Hoover et al). It was interesting, however, that the 1.6cm loss of adult height was evident only in the patients with weight less than 15kg. The bottom line is that practitioners can be reassured when telling parents that when using Inhaled Corticosteroids to control Asthma, there is no significant effect on growth. It is important to educate parents on the need for controller medications in light of this.

References:

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