Intranasal Corticosteroids for Chronic Sinus Inflammation: Triamcinolone versus Beclomethasone

Context
Acute and chronic sinusitis, rhinitis, and rhinosinusitis are symptomatic inflammations of the paranasal sinuses, nasal cavity, or both. Although data on prevalence are lacking, they are believed to occur frequently in children and adults. The inflammation can be caused by viral or bacterial infections, allergies, or non-allergic responses to irritants in the air. Many patients manage these conditions without seeking medical attention, but if symptoms persist or recur, medication may be required. Treatment varies depending on the cause of the inflammation, but usually includes intranasal corticosteroids to relieve the symptoms of sneezing, nasal congestion, and runny nose (rhinorrhea).

Technology
There are currently seven intranasal corticosteroids available in Canada for the treatment of sinusitis, rhinitis, and rhinosinusitis: beclomethasone, budesonide, ciclesonide, flunisolide, fluticasone, mometasone, and triamcinolone. These medications are sprayed or inhaled into the nose and have been proven effective to reduce inflammation and swelling, resulting in the symptomatic treatment of these conditions.

Issue
The side effects of intranasal corticosteroids are usually mild and include nosebleed, irritation of the nose and throat, and headache; but occasionally more serious side effects can occur. The risk of systemic side effects, such as growth restriction in children or glaucoma in adults, are low because the medication is delivered directly to the nasal cavity and sinuses; however, the systemic absorption rates are different for each available intranasal corticosteroid.

A review of the comparative clinical effectiveness and safety of intranasal triamcinolone and beclomethasone will help to guide decisions about their use.

Methods
A limited literature search of key resources was conducted, and titles and abstracts of the retrieved publications were reviewed. Full-text publications were evaluated for final article selection according to predetermined selection criteria (population, intervention, comparator, outcomes, and study designs).

Key Messages
Intranasal Triamcinolone* versus Beclomethasone:
- Efficacy of both drugs was similar.
- Intranasal triamcinolone is safer based on the risk of epistaxis (nosebleed), long-term growth effects, and systemic ocular effects

*Based on a systematic review with meta-analysis evaluating the drugs for the treatment of allergic rhinitis (not chronic sinus inflammation)

Results
The literature search produced 53 citations with an additional 3 studies identified from the grey literature. Of these 56 reports, 12 were deemed potentially relevant. Following full-text reviews, 1 study met the criteria for inclusion in this review — a systematic review with meta-analysis.

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