Focus on....

Triamcinolone Acetonide Aqueous

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Triamcinolone acetonide is a synthetic corticosteroid and about 8 times more potent than prednisone. The metered-dose nasal spray is a thixotropic formulation, containing triamcinolone acetonide suspended in a water-based medium. Each delivered dose of spray contains 55 micrograms (mcg) of triamcinolone acetonide.

Indications

Triamcinolone acetonide administered via the nasal route is used for the treatment of symptoms of seasonal and perennial allergic rhinitis in adults and children from 6 years of age.

Dosing

For both adults and children, triamcinolone acetonide nasal spray should be discontinued if relief of symptoms is not achieved after 3 weeks of continued use.

Adults and children from 12 years of age:

A starting dose of 220 mcg (2 sprays in each nostril) once daily is recommended. Once symptoms are controlled, the dose can be adjusted to a lower maintenance dose of 110 mcg (1 spray in each nostril) once daily.

Children 6 – 12 years of age:

A starting dose of 110 mcg (1 spray in each nostril) once daily is recommended. This dose may be increased to 220 mcg (2 sprays in each nostril) once daily in paediatric patients with more severe symptoms. The dose should be reduced to the lowest effective dose, i.e. 1 spray in each nostril once daily, once symptoms are under control.

Continuous use longer than 3 months is not recommended for children under 12 years of age.

Children 2-5 years of age:

Limited studies on safety and efficacy have been conducted in this age group. While use of triamcinolone acetonide nasal spray in this age group is not recommended, a maximum dose of 110 mcg (1 spray in each nostril) once daily may be administered.

Safety and efficacy in children under 2 years of age has not been established.

Pharmacokinetics

Systemic absorption of triamcinolone acetonide aqueous via the nasal route appears to be minimal. Triamcinolone acetonide in aqueous formulation is rapidly eliminated. This, together with increased nasal retention, decreases oral bioavailability and hence systemic absorption. Mean plasma concentrations of approximately 0.5 ng/ml following a single 220 mcg dose of the aqueous spray was detected at 1.5 hours. The average terminal half-life is 3.1 hours.

Efficacy

Symptomatic relief is usually expected within 3-4 days, with onset of action occurring as early as 10 hours from first use.

Therapeutic efficacy has been shown to be due to the topical and not the systemic effects of triamcinolone acetonide nasal spray. Relief of symptoms is experienced at doses of 110 to 220 mcg/day. Higher doses produce greater efficacy.

Triamcinolone acetonide aqueous given at 220 mcg/day as a single dose versus beclomethasone given at 336 mcg/day in 2 divided doses, had comparable results in the treatment of allergic rhinitis.

A comparison study of efficacy and safety between once daily fluticasone (200 mcg) and once daily intranasal triamcinolone aqueous (220 mcg) in patients with seasonal allergic rhinitis, showed similar results.

Duration of treatment is dependent on whether the symptoms are seasonal or perennial. The lowest effective dose to control symptoms should be employed if symptoms are perennial with monitoring every 3 months to determine whether the benefit outweighs the risk of long-term use.

Adverse effects and precautions

Adverse effects are generally limited locally to the nasal and throat mucosa.
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Most common side-effects include: headache, pharyngitis, rhinitis, cough and epistaxis.\textsuperscript{2,3,4,6} Other local side-effects, the frequency of which is unknown, have been reported, e.g. alterations of taste and smell, sneezing and nasal irritation.\textsuperscript{3} Nasal septal perforation and Candida infection of the nose and throat, although rare, have been reported. Until healing has occurred, nasal corticosteroids should not be used, due to corticosteroids preventing the healing of wounds.\textsuperscript{2}

Triamcinolone acetonide aqueous nasal spray, used in recommended doses and short-term, does not suppress adrenal function.\textsuperscript{4} Potential for systemic adverse effects may occur when nasal corticosteroids are administered at higher doses than recommended.\textsuperscript{2,3} If the same patient is also on inhaled corticosteroids for asthma, a cumulative dose may result in systemic side-effects.\textsuperscript{4} High doses for prolonged periods of time, although rare, may lead to systemic side-effects, such as glaucoma and cataracts. Close monitoring is recommended in patients who may have raised intra-ocular pressure or who complain of visual disturbances. Other systemic side-effects, such as bronchitis and flu-like illness have also been reported.\textsuperscript{4}

Studies have indicated that a reduction in growth velocity may occur in paediatric patients due to systemic corticosteroid exposure. A 2-month follow-up of a double-blind placebo controlled study of children aged 3-9 years, showed that mean growth velocity returned to pre-treatment values after discontinuing treatment.\textsuperscript{3} Systemic exposure may be minimised by employing the lowest possible dose to treat symptoms.\textsuperscript{2} The height of children receiving treatment should be regularly monitored.\textsuperscript{2}

Conclusion

Intranasal use of corticosteroids in allergic rhinitis reduces all nasal symptoms, is active in reducing early and suppressing late phase allergic reactions, and relieves inflammation in the upper airways.\textsuperscript{4}

References