


Mometasone Furoate Nasal Spray in Allergic Rhinitis

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Introduction

- **Mometasone furoate** is a synthetic corticosteroid → for intranasal use in the treatment of adults and children with allergic rhinitis
 - well-controlled clinical trials, mometasone furoate 200 micrograms administered once daily : intranasal spray was significantly more effective than placebo in controlling the symptoms associated with **moderate to severe seasonal or perennial allergic rhinitis**
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Mometasone Furoate

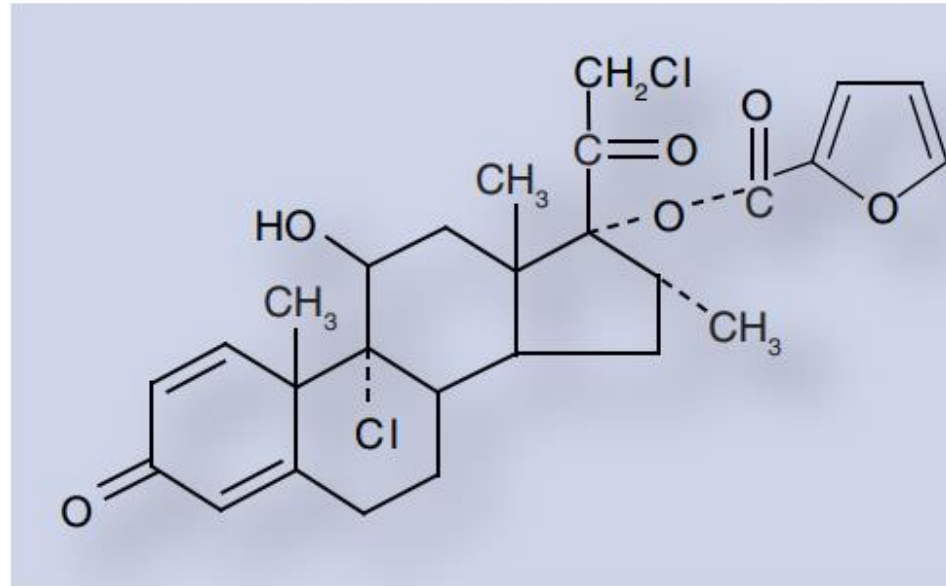



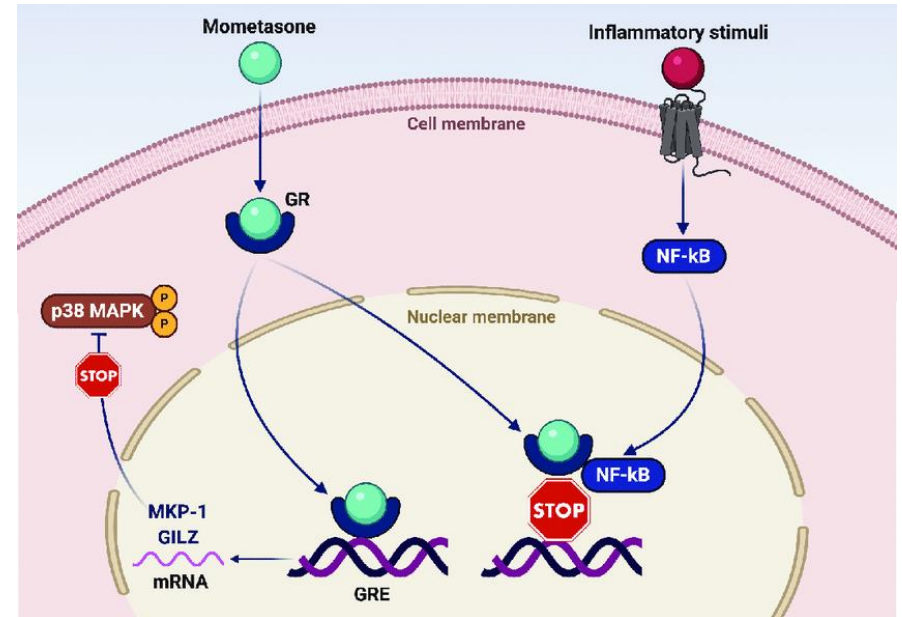
Figure 1. Mometasone furoate.

Mometasone Furoate...


- One of the most extensively investigated intranasal corticosteroids for inflammatory diseases of the nose and sinuses is mometasone furoate nasal spray
 - Mometasone furoate is a potent 17-heterocyclic corticosteroid formulated in an aqueous suspension
 - For intranasal use
 - A metered-dose, manual pump nasal spray
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Mometasone Furoate...

- In vitro testing has shown that mometasone furoate has a **high binding affinity** for the glucocorticoid receptor and is a potent stimulator of glucocorticoid receptor-mediated gene expression



Mometasone Furoate...

- Mometasone furoate has been proven to be effective for the prophylaxis and treatment of
 - a) seasonal allergic rhinitis**
 - b) perennial allergic rhinitis**
 - c) an adjunct to antibiotics in the treatment of acute bacterial rhinosinusitis
 - d) as monotherapy in uncomplicated cases of acute rhinosinusitis
 - e) treatment of nasal polyposis
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Allergic Rhinitis

- Prevalence


- 13% of the American population
- d 17–29% of the European population

- Age

- prevalent chronic allergic disease among **children**
approximately 40% by the age of 6 years



Allergic Rhinitis...

- **Seasonal allergic rhinitis :**
 - an IgE mediated response to outdoor seasonal allergens such as molds or pollen.
 - **Perennial allergic rhinitis :**
 - a number of conditions that result from either continuous or intermittent exposure to allergens, most commonly indoor allergens such as dust mites, molds, insects (cockroaches) and animal dander.
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Treatment of Allergic Rhinitis...

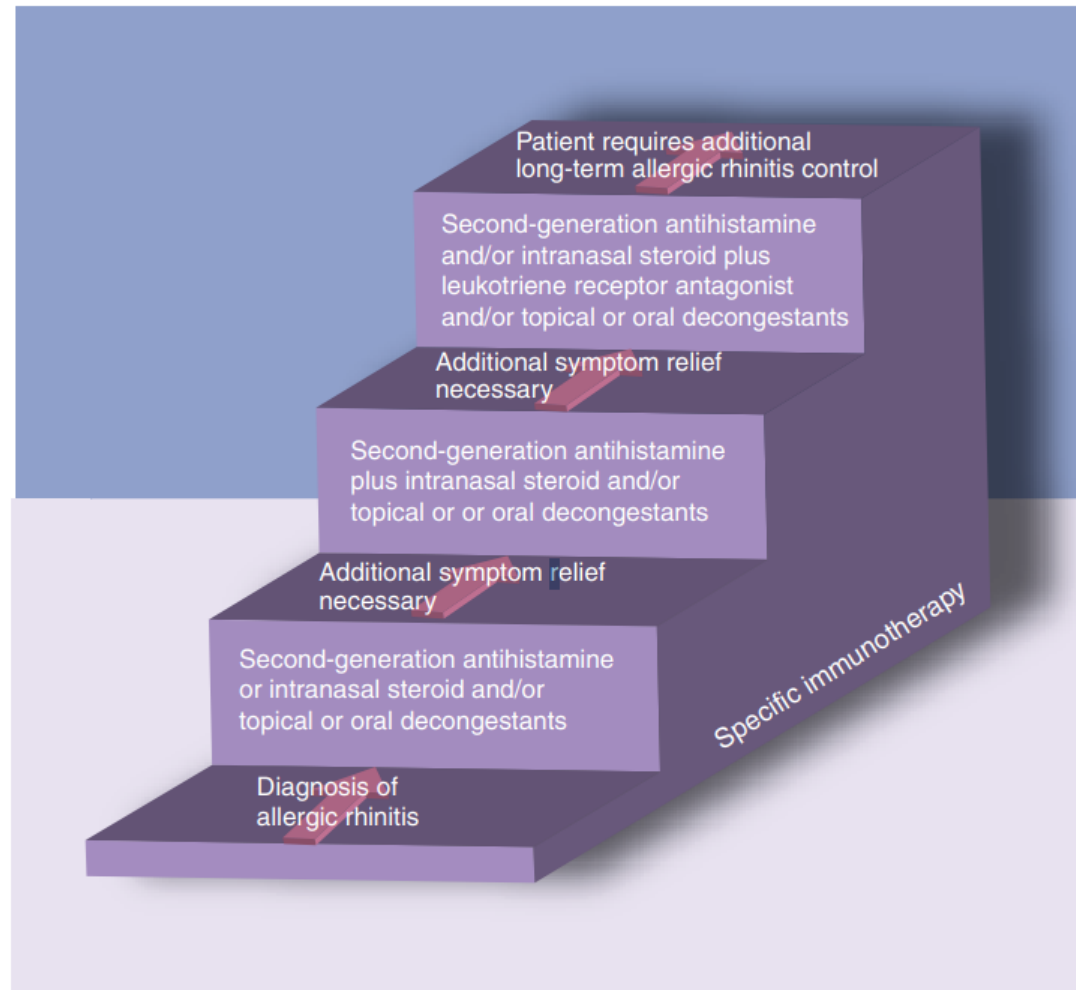


Figure 2. Stepwise approach to treatment for allergic rhinitis.
Adapted with permission from [33].

Safety of Mometasone Furoate

- Local adverse events

- Epistaxis

- ranging from blood-tinged mucus to bleeding

- Headache

- Systemic safety

- particularly for pediatric: use of intranasal corticosteroids has not been associated with serious side effects

- concerns regarding possible systemic effects, including impairment of the normal response to stress, growth retardation due to suppressed cortisol levels, formation of cataracts and osteoporosis → not proven

Treatment of Allergic Rhinitis...

Table 3. Bioavailability of intranasal corticosteroids.


| Intranasal corticosteroid | Bioavailability (%) |
|---|----------------------------|
| Flunisolide | 49 |
| Beclomethasone dipropionate | 44 |
| Budesonide | 34 |
| Fluticasone propionate | 0.42 |
| Mometasone furoate | 0.46 |
| Fluticasone furoate | 0.50 |
| <i>Data taken from [100,102,103,105].</i> | |

Conclusion

- Extensive clinical evidence has confirmed that **Mometasone Furoate** is a highly effective treatment for common inflammatory disorders of the upper respiratory tract
- Extensive clinical testing has demonstrated that Mometasone Furoate is a **safe** and **effective** therapeutic option



Reference

- Bousquet J, Khaltaev N, Cruz AA et al. : Allergic Rhinitis and its Impact on Asthma (ARIA) 2008 update (in collaboration with the World Health Organization, GA2 LEN and AllerGen). Allergy 63(Suppl. 86), 8–160 (2008).
 - Dykewicz MS, Fineman S: Diagnosis and management of rhinitis: complete guidelines of the Joint Task Force on Practice Parameters in Allergy, Asthma, and Immunology. Ann. Allergy Asthma Immunol. 81, 478–518 (1998).
 - Small C B, Teper A: Efficacy and safety of mometasone furoate nasal spray in allergic rhinitis, acute rhinosinusitis and nasal polyposis, Theraphy. 6, 393-406 (2009).
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TERIMA KASIH...

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