

Pharmacotherapy of Rhinitis and Rhinosinusitis

Mohamad Chaaban, MD*, Jacquelynne P. Corey, MD

KEYWORDS

- Rhinitis • Rhinosinusitis • Pharmacotherapy • Allergy
- Allergic conjunctivitis

Key Points

- Intranasal corticosteroids (INCS) are an effective first-line treatment of allergic rhinitis.
- INCS are more effective than oral antihistamines or leukotriene receptor antagonists for the treatment of allergic rhinitis.
- Intranasal antihistamines are effective for nasal congestion and some types of nonallergic rhinitis.
- Most oral antihistamines control all the nasal symptoms of rhinitis except nasal congestion.
- Topical antihistamines, mast cell stabilizers, or combinations are useful for allergic rhinoconjunctivitis (ARC).
- Ocular itching is the pathognomonic sign of ARC.
- The most common bacteria isolated from the maxillary sinuses of patients with acute bacterial rhinosinusitis include *Streptococcus pneumoniae*, *Haemophilus influenzae*, and *Moraxella catarrhalis*.
- Most guidelines recommend amoxicillin as first-line therapy for the treatment of acute rhinosinusitis because of its safety, effectiveness, low cost, and narrow microbiological spectrum.
- A 2009 Cochrane review suggested the use of INCS as a monotherapy or as an adjunct to antibiotics for patients with acute rhinosinusitis.
- Cosmetic surgery in patients with inflammation due to ARC, acute rhinosinusitis, or chronic rhinosinusitis may be performed if treatment, avoidance, or timing is used to reduce inflammation.

Symptomatic allergic rhinoconjunctivitis (ARC) affects around 20% of adults in the United States. A nationwide survey in 2006 showed that 54.6% of people in the United States tested positive for at least 1 allergen.¹ Allergic disorders can affect all portions of the respiratory tree, including the nose, and commonly affect the eyes as well. Concerns for the cosmetic surgeon relative to allergic disorders include diagnosis, treatment, and assessment of the disease and whether or not therapy may affect the timing or outcome of cosmetic procedures. In this article, the pharmacotherapy of

allergic and nonallergic rhinoconjunctivitis and rhinosinusitis is discussed. Although rhinitis and conjunctivitis may both occur without IgE-mediated allergy, it is the most common mechanism. Rhinosinusitis, both acute and chronic, involves inflammation, which may be reduced with antiinflammatory therapies.

PATHOPHYSIOLOGY OF ARC

Allergen sensitization in the nose starts with the interaction of the antigen-presenting cell with the

Department of Surgery, Section of Otolaryngology–Head and Neck Surgery, University of Chicago Medical Center, 5841 South Maryland Avenue, Chicago, IL 60637, USA

* Corresponding author.

E-mail address: mchaaban@gmail.com

Facial Plast Surg Clin N Am 20 (2012) 61–71

doi:10.1016/j.fsc.2011.10.007

1064-7406/12/\$ – see front matter © 2012 Elsevier Inc. All rights reserved.

T helper cell. On deposition of the allergen in a susceptible host, the interaction results in IgE production (**Fig. 1**).² This IgE response is the pathophysiologic basis of allergic rhinitis, and it includes both early and late phases. The most important cell mediating the early response is the mast cell. Cross-linkage of membrane-bound IgE triggers mast cell degranulation, releasing histamine and a cascade of allergic and inflammatory mediators. During the early phase, there may be symptoms of itchiness, rhinorrhea, and sneezing. In the late phase, B cells (T cells and basophils) are recruited. The presence of these cells results in an increase in production of allergen-specific IgE and increased hyperresponsiveness to the allergen.

DIAGNOSIS OF RHINITIS

History

Documenting the patient's history is the most important first step. The patient should be encouraged to describe specific symptoms, such as sneezing, itchy eyes, and nasal blockage. Common allergic symptoms include nasal blockage/congestion; rhinorrhea (anterior and posterior); paranasal pain or headache; sneezing; pruritus; itchy, watery, or red eyes; anosmia; dysosmia; chronic pharyngitis; and hoarseness. Symptoms may occur perennially from dust mites, molds, cockroaches, cats, or dogs and/or seasonally from trees, grasses, weeds, and seasonal molds.

Patients with allergy generally have many concurrent symptoms. It is important to ask the patient to focus on what is most bothersome and

choose the 3 to 4 most prominent symptoms, such as nasal congestion, itchy eyes, sneezing, and red eyes.

Physicians should document the factors that worsen symptoms, such as windy days for pollen or visits to a home with pets; medications being used, both prescription and over-the-counter (OTC); and the patient's response or lack of response to the treatments. It should be noted that many allergy medications are available OTC at present, and most patients have tried at least OTC treatment or received a prescription from their primary care physician. A family history of documented allergy can be an important clue that current symptoms may be caused by allergy. It is also important to ask about other related health issues, including atopic disorders such as eczema, food allergy and urticaria.

Physical Examination

Initial examination can show classic signs of allergy, such as "boggy" bluish nasal mucosa, red inflamed nasal mucosa, or excessive clear watery mucus. In the eyes, dark skin of the lower eyelids (allergic shiners), periorbital and/or conjunctival erythema, and edema may be present.

Seasonal and perennial allergic conjunctivitis represent most cases of ocular allergy, whereas the more severe conditions of atopic keratoconjunctivitis (AKC) and vernal keratoconjunctivitis (VKC) affect a smaller group of patients. **Fig. 2** shows photographs of eyes from individuals with the various forms of allergic conjunctivitis.³ Allergic conjunctivitis is typically elicited by ocular exposure to allergen. Despite differences in

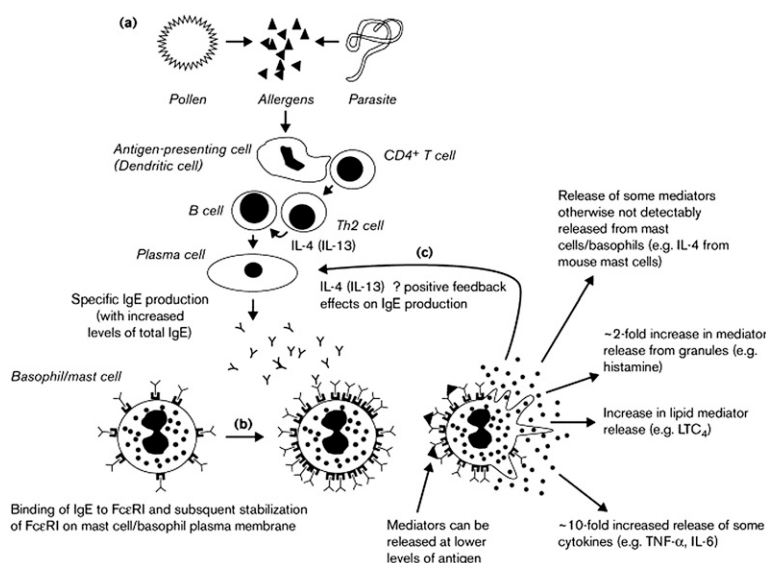


Fig. 1. (a) Various factors can trigger immune responses, whereby specific IgE is produced by plasma cells. (b) Binding of IgE upregulates its receptors and results in response at lower levels of antigen (eg, allergens) and in increased release of mediators and cytokines. (c) There may also be a positive feedback via IL-4 and IL-13 that increases IgE production. (Adapted from Wedemeyer J, Tsai M, Galli SJ. Roles of mast cells and basophils in innate and acquired immunity. *Curr Opin Immunol* 2000; 12(6):627; with permission.)

Download English Version:

<https://daneshyari.com/en/article/4111000>

Download Persian Version:

<https://daneshyari.com/article/4111000>

[Daneshyari.com](https://daneshyari.com)