ENT Manifestations of Allergy

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The Importance of Allergy in ENT Practice

- Allergic rhinitis is present in approximately 20% of the general population.
- It is estimated that 25% of patients with allergic rhinitis also have asthma.
- Up to 75% of patients with asthma have allergic rhinitis.
- It is estimated that 50% of patients attending a general ENT office will have allergic disease that contributes to their chief complaint.

The Economic Impact of Allergies

- Allergies are the 6th leading cause of chronic disease in the U.S., and the #1 respiratory disease, costing the healthcare system $18 billion annually.
- 3.4 million days lost from work annually and 2 million days lost from school.
- Approximately 25% decline in worker productivity

Definitions

- Atopy
  - The genetic predisposition to develop allergies to food and inhalant substances.
  - Introduced by Coca in 1925 – atopic dermatitis
  - “different location”
- Allergy
  - The formation of excessive IgE antibodies to foods, inhalants and contactants.
  - Type I hypersensitivity
  - May manifest as dermatitis, asthma, conjunctivitis and multiple ENT manifestations

Classic faces of allergy
### When to think about allergies
- CRS, particularly with polyps or AFS
- CSOM, multiple PE tubes, SOM < 1 year of age
- Meniere's disease, chronic vestibular symptoms
- Chronic headaches, Migraine HA
- Chronic laryngitis
- Post nasal drip
- Unexplained GI symptoms, food intolerance
- Eczema
- Asthma
- Strong family history
- The "many syndrome"

### Types of Rhinitis
- Seasonal allergic rhinitis
  - spring and fall
- Perennial allergic rhinitis
  - indoor allergens and mold
- Non-allergic rhinitis
  - vasomotor, chemicals, irritants, weather, medicamentosa, pregnancy
- Mixed rhinitis - 1/3 of all cases
- Infectious rhinitis - viruses, bacteria, fungi

### Diagnosis of Allergy
- History
  - Chief complaint, HPI, PMH, PSH, known allergies, social history, family history, review of systems.
- Physical exam
  - Complete head and neck exam
  - Skin, eyes and lungs
  - Nasal endoscopy and/or laryngoscopy
- Allergy testing
  - Obtain results of prior testing
  - Necessary to make definitive diagnosis
  - Required prior to initiating immunotherapy

### Important Questions to Ask
- What symptoms do you have?
- Duration? Frequency? Triggers?
- Seasonal vs. Perennial? AM vs. PM?
- What makes your symptoms feel better? Worse?
- Have you tried any medications? Did they help?
- Any significant exposure to pets?
- Home and work: recent moves, renovations, moisture and ventilation problems, carpets, cockroaches, hobbies and sports
- What do you think the problem is?
Physical Exam: General Appearance

- Activity level
  - Restlessness in children
  - Sad expression
  - Adults may appear fatigued

- Gestures
  - Allergic salute
  - Grimacing
  - Clucking

Physical Exam: Facial Features

- Dry, itchy scaling skin which often becomes erythematous
- Chronic irritation directly below the nostrils
- Long, silky eyelashes
- Allergic shiners
- Adenoid facies
- Dennie-Morgan lines
- Supratip crease

Allergic Salute

Grimacing

Another Allergic Salute?

Allergic Shiners

- Chronic nasal obstruction leading to impaired venous drainage via the sphenopalatine veins
- Angular and palpebral veins become engorged
- Hemosiderin deposits in the lower eyelid
- The staining may become permanent
Adenoid Facies

- Long, narrow face
- Dull expression
- Mouth open
- Retracted upper lip with upper teeth visible
- Recessive chin
- Cheekbones less prominent
- Wide nasal dorsum
- Narrowing of nares

Dennie-Morgan Lines

- Orbital venous stasis
- Local hypoxia
- Spasm of Mueller’s muscle.
- Usually appears with allergic shiners
- May also become permanent

Supratip Crease

- Usually requires approximately two years of the allergic salute to occur
- Rhinoplasty may be helpful in the future
- Pimples may later occur in this region.

Physical Exam: Eyes

- Acute allergic conjunctivitis represents 95% of all ocular allergy
- Mast cells are abundant in the conjunctiva
- Symptoms include itching, burning, tearing

Physical Exam: Ears

- External
  - Signs of contact dermatitis or eczema
  - Pruritis
- Middle
  - ET is the shock organ for allergy
  - Increased edema and vascularity of middle ear mucosa enhances gas exchange
  - Middle ear mucosa plays active role in antigen specific IgE production
- Inner
  - Chronic dizziness and “floating sensation”
  - Vestibular or cochlear hydrops

Chronic Serous Otitis Media
Physical Exam: Nose/PNS/NP

- Pale, boggy middle and inferior turbinates
- Mulberry tips
- Clear, watery rhinorrhea
- Sneezing
- Pruritis
- Polyps
- Hyperplastic adenoids
- Eustachian tube orifice edema

Anterior Nasal Exam

CRS with polyps

Physical Exam: Oral cavity and Oropharynx

- Mouth-breathing, open mouth appearance
- Dry, chapped lips
- Bad breath
- Gingival disease, periodontal disease
- Geographic tongue
- Cryptic tonsils
- Submucosal lymphoid hyperplasia in the posterior pharynx ("cobblestoning")
- High-arched (v-shaped) palate

High-Arched Palate

Physical Exam: Larynx

- Hoarseness
- Post nasal drip
- Chronic cough
- Globus sensation
- Edema of all laryngeal structures on laryngoscopy
Physical Exam: Chest

- Yes, you'll have to find your stethoscope!
- Asthma is the most common manifestation
- Expiratory wheezing
- Consider “cough variant” asthma
- A few inches below the clavicle, just lateral to the sternum is the best place to listen

Thank You!