

CLINICAL ALLERGY IMAGES

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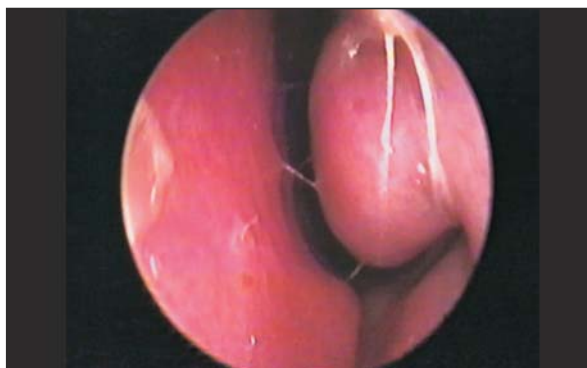
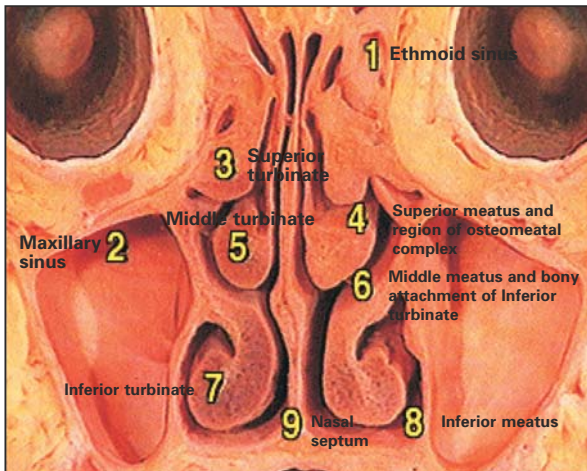
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This is the second in a series about clinical images relevant to the practice of allergy and immunology.

INTRANASAL EXAMINATION IN ALLERGIC PATIENTS

In the last issue of *Current Allergy & Clinical Immunology* (2005; 18: 22-23) we detailed images of the external features compatible with a diagnosis of the atopic syndrome. The following images deal with the intranasal examination.

The intranasal examination can be accomplished with either an otoscope, or ideally, a flexible nasal endoscope. The endoscope offers examination with a brighter light and improved visualisation. Flexible endoscopy also allows the examiner to see beyond obstructing anatomical structures or pathology such as septal deviation, enlarged turbinates, or obstructing polyps.



Figs 1 & 2. Normal intranasal anatomy and mucosa.

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Fig. 3. Inflamed inferior nasal turbinate with thin clear secretions.

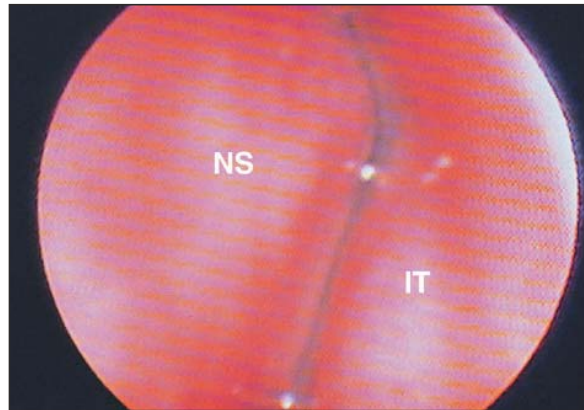


Fig. 4. Nasal turbinate swelling. NS – nasal septum, IT – inferior turbinate.

Features to be noted during the intranasal examination

- Observe the normal anatomical structures and mucosa (Figs 1 and 2).
- In patients with allergic rhinitis the nasal turbinates are classically enlarged and 'boggy' and may appear pale or bluish-grey in colour (Figs 3 and 4). Patients may also present with mucosal erythema. Erythema is also a common feature of rhinitis medicamentosa, mucosal infection, or vasomotor rhinitis. While the appearance of pale, boggy, blue-grey nasal mucosa is typical for allergic rhinitis, these findings alone cannot distinguish between allergic and non-allergic rhinitis.
- Thin watery nasal secretions are frequently associated with allergic rhinitis (Fig. 3).
- The nasal septum may demonstrate deviation or nasal vestibular stenosis. Only with significant septal deviation will symptoms of rhinitis be mimicked.
- There may be signs of epistaxis secondary to aggressive nasal rubbing and/or sneezing. A septal haematoma (a mass of extravasated blood confined within the nasal septum) may very occasionally be observed.
- Nasal septal perforation is rare but may be present as a complication of chronic rhinitis, granulomatous

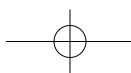




Fig. 5. Middle-ear effusion.

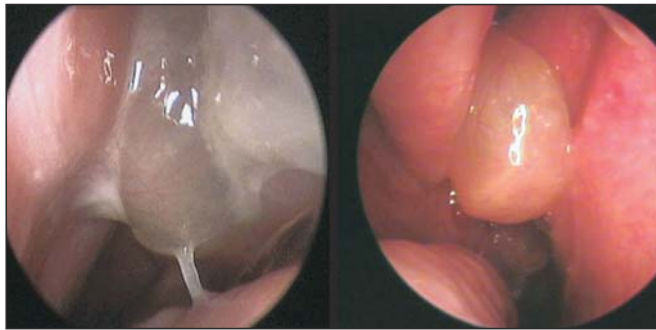


Fig. 6. Nasal polyp.

disease, cocaine abuse, prior surgery, topical decongestant abuse, or, rarely, topical steroid overuse.

- The tympanic membranes should be examined for signs of concomitant middle ear and eustachian tube dysfunction. Abnormal findings may include; serous effusions with air fluid levels, membrane retraction, and abnormal membrane mobility (Fig. 5). A formal assessment of hearing may be indicated.
- Additional intranasal findings may include nasal polyps or rarely, tumours (Fig. 6). Polyps are firm grey masses that are often attached by a stalk, which may or may not be visible. After the area is sprayed with a topical decongestant, polyps do not shrink, while the surrounding nasal mucosa does shrink. Polyps are insensitive to pain which may also help differentiate these masses from the surrounding mucosa. A mucopurulent discharge may be observed, suggesting underlying rhinosinusitis (Fig. 7). Thick and purulent secretions may however also be observed in allergic rhinitis.
- It is useful to take a nasal smear for staining with Hansel's stain as the presence of nasal secretion eosinophilia is regarded as a hallmark of nasal allergy. Eosinophils are seldom seen on a stained smear from a non-allergic nasal patient. Eosinophil numbers

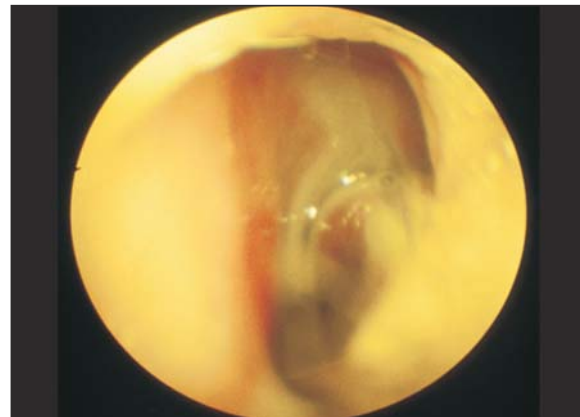


Fig. 7. Thick, purulent nasal effusion indicative of sinusitis.

reduce as the patient improves on topical nasal steroids and when smears are studied outside of the pollen season in patients with seasonal allergy. The presence of sheets of neutrophils on a nasal smear suggests an infective rhinitis or infection in the paranasal