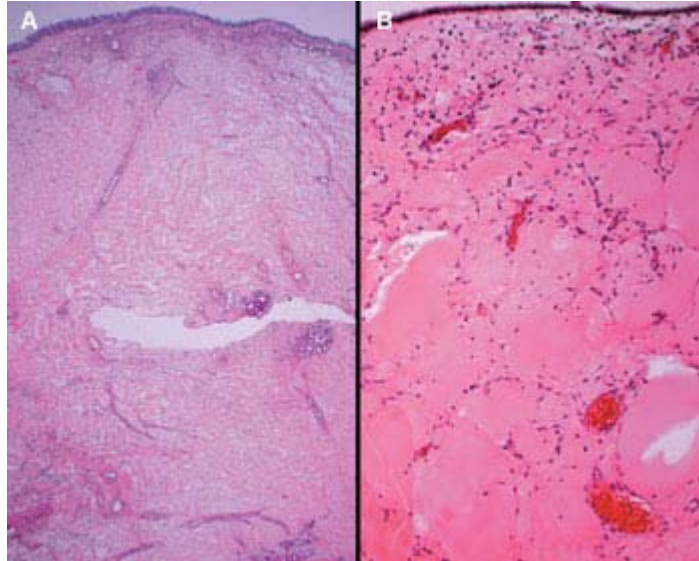


## Sinonasal polyps

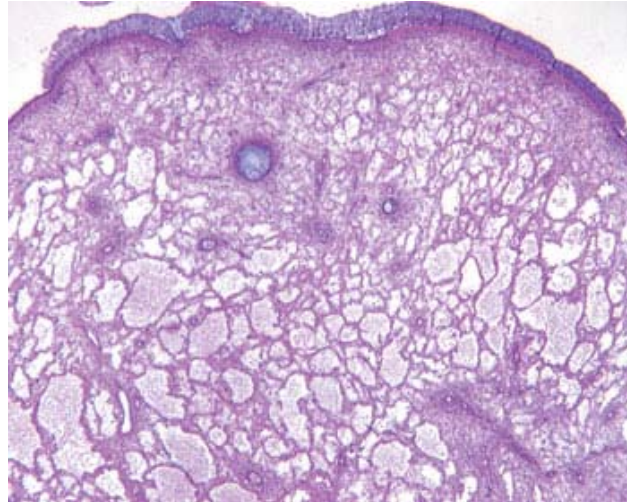
Lester D.R. Thompson, MD, FASCP



*Figure 1. Sinonasal polyps have an edematous to fibrous connective tissue stroma (A and B). An edematous fluid (B) is often present within the stroma.*

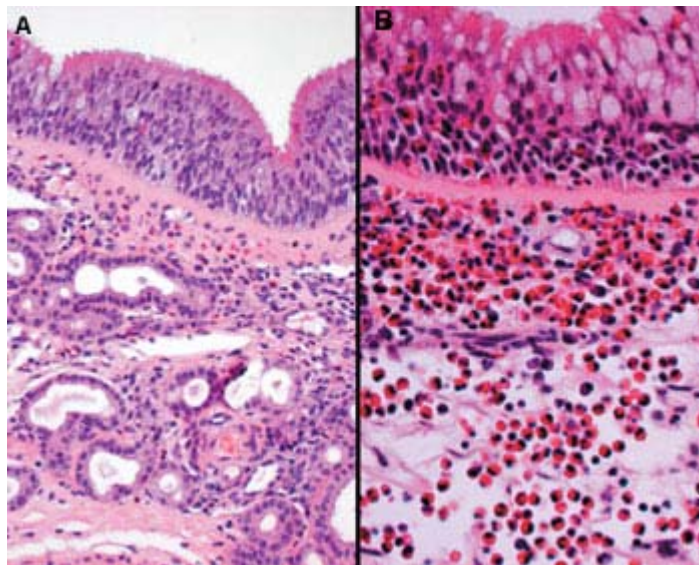
Sinonasal polyps are caused by a multitude of factors. The most common causes are repeated bouts of sinusitis, allergy, vasomotor rhinitis, infectious rhinosinusitis, and asthma. Less often, they occur in association with diabetes mellitus, cystic fibrosis, and aspirin intolerance. They form as a result of an influx of fluids into the schneiderian mucosal lamina propria. Occasionally, antral (maxillary) polyps expand and prolapse through sinus ostia to present intranasally or in the nasopharynx (antrochoanal polyps). Sinonasal polyps have no predisposition to age or sex. Polyps are uncommon in children, but when they do occur, as many as 30% are associated with cystic fibrosis.

Patients with sinonasal polyps present with rhinorrhea, stuffiness, nasal discharge, headaches, sinusitis, and other nonspecific symptoms referable to the sinonasal tract. Radiographic studies may show a solitary mass or multiple expansile masses within the nasal cavity and/or paranasal sinuses, frequently associated with mucus retention or thickened mucosa. Sinonasal polyps are usually smooth, glistening, translucent, and gray to pink.



*Figure 2. A pseudoangiomatous pattern can be seen in some polyps, resulting in large dilated spaces. Note the intact respiratory-type epithelium.*

Classic sinonasal polyps are polypoid structures with an edematous to fibrous stroma (figure 1). Pseudoangiomatous (lymphangiomatous) polyps contain proliferating thin-walled vessels in a loose edematous to myxoid matrix (figure 2). The surface is usually intact, although squamous metaplasia and ulceration can develop. Polyps contain a moderate degree of chronic inflammation within the lamina propria (figure 3). Mucoserous glands are present. If the polyps are related to allergies or asthma, a thickened basement membrane and a prominent eosinophilic infiltrate may be seen. Polyps of all types may undergo infarction, organization, or secondary infection. Polyps may coexist with other sinonasal tract disorders, which should be carefully excluded.



*Figure 3. A: Chronic inflammatory cells and mucoserous glands are present in the stroma of this polyp. B: This polyp contains a remarkably large number of eosinophils, a finding that is seen more frequently when asthma or allergy is an etiologic factor.*

Removal of the underlying etiologic agent, if known, results in a significant reduction in morbidity. Polyps are usually amenable to conservative endoscopic removal and improved sinus ventilation.

## **Suggested reading**

Gysin C, Alothman GA, Papsin BC. Sinonasal disease in cystic fibrosis: Clinical characteristics, diagnosis, and management. *Pediatr Pulmonol* 2000;30(6):481-9.

Passali D, Bellussi L, Hassan HA, et al. Consensus Conference on Nasal Polyposis. *Acta Otorhinolaryngol Ital* 2004;24(2 suppl 77):3-61.



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