

Clearing the Air on Nasal Polyps

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Edna's nasal obstruction

Edna, 48, presents with a history of gradually progressing nasal obstruction with paranasal fullness, pressure, and reduced sense of smell and taste. There is no pain or epistaxis.



She describes symptoms of occasional sneezing, pruritus in the nose and eyes, postnasal drip, and eustachian tube dysfunction symptoms of pressure and fullness in the ears. The symptoms first hit around the same time Edna was transferred to another work site; an older, damper building with poor ventilation.

Edna says she is not an allergy sufferer, but was treated for asthma as a child.

Anterior rhinoscopy showed a number of small pale, glistening masses in the nose, bilaterally, extending from the roof of the nose inferiorly.

What do they look like?

Nasal polyps look like peeled grapes. They are edematous, tear-shaped masses. Their label is somewhat of a misnomer, since they usually arise from the ethmoid sinuses. They, therefore, project into the middle meati regions of the nose. They are the most common of masses found in the nose.

Nasal polyps differ in terms of origin, as well as clinical significance relative to maxillary sinus polyps, which really should be called mucous retention cysts. Nasal polyps carry an extremely low profile, but severely affect the quality of a patient's life.

How common are nasal polyps?

They are much more common than people think. Many of the "bad sinus" patients with recurrent acute on chronic sinusitis most likely have underlying nasal polyps as the root of their problem.

They are mainly an adult disease, and are as common in men as they are in women.

If they are present in a preteen, one would be obliged to rule out cystic fibrosis.

What causes nasal polyps?

The exact etiology is unknown, but nasal polyps are associated with several entities (Table 1).

The acetylsalicylic acid (ASA) sensitivity triad itself is surprisingly common. Patients typically have adult onset intrinsic asthma with nasal polyps and chronic sinusitis. Many of these patients are sensitive to ASA or nonsteroidal anti-inflammatory drugs (NSAIDs), but do not know it. Exposure to ASA or other NSAIDs can lead to exacerbation of the asthma, and even anaphylaxis.

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What are the types of nasal polyps?

Nasal polyps are poorly understood. It would appear that there are three different types of nasal polyps in my clinical practice. A small minority of patients are fortunate enough to have a very large polyp originating from the medial wall of the maxillary sinus, extending into the nose and even the choana, and into the throat. These polyps, called antrochoanal polyps, are often unilateral and completely isolated in terms of there only being one. The cure rate with proper surgical removal by the endoscopic approach is almost 100% compared to the run of the mill multiple bilateral nasal polyps. The majority of patients have multiple bilateral nasal polyps where they can have 10 to 20 small nasal polyps in each nasal cavity, measuring anywhere between 3 mm and 20 mm. The final group of almost non-curable nasal polyposis disease is that associated with severe hyperplastic chronic sinusitis.

In these cases, the nasal polyps are accompanied by severe edema of all of the sinonasal mucosal lining, and it is almost difficult to tell which is a polyp and which is edematous mucosa. These are the polyps typical of ASA sensitivity triad and cystic fibrosis.

What are the clinical findings?

The primary symptoms of nasal polyps are nasal obstruction, decreased sense of smell and usually taste, and anterior watery rhinorrhea. On physical exam, the nasal polyps are often clearly visible as edematous tear shaped grape-like masses in the nose. They are far less vascular

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Table 1

Entities associated with nasal polyps

- Allergy (50% of patients with polyps have allergies)
- Chronic sinusitis
- Cystic fibrosis
- Acetylsalicylic acid sensitivity triad

than nasal turbinates, and much more watery. They have no sensation and, in themselves, bleed very little. A nasal polyps patient has a very typical hyponasal voice. This type of voice often has family and friends stating that the patient always sounds like they have a cold. Finally, the patient presents with symptoms and signs of chronic sinusitis.

An antrochoanal polyp will present as severe nasal obstruction, and one can often see the polyp on a nasopharyngeal exam hanging into the choana. These are most often unilateral.

What are the symptoms?

Decreased or lack of a sense of smell is a symptom of nasal polyps, especially if accompanied by a stuffy nose. The physical exam would utilize a nasal speculum and some source of light (or an otoscope). The indirect nasopharyngoscopy is extremely valuable. Biopsy would be required to rule out cancer, especially if the nasal polyps are unilateral, or if the polyp looks less edematous than most.

Sinonasal endoscopy has almost halved the incidence of nasal polyps due to better access and visualization. Sinus endoscopy can be directed at the middle meatus where small polyps are often hidden from nasal speculum examination. Sinonasal endoscopy also enables us to biopsy polyps in the office or ambulatory care department, without taking the patient to the operating room. Since the polyps are anesthetized, minimal discomfort is experienced while the actual polyp is being removed for diag-

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nosis and treatment. Imaging is vital with plain sinus X-rays, and most often a computed tomography (CT) scan, especially if surgery is contemplated. In fact, the new generation CT scanners have helped challenge some of our thoughts on the pathophysiology of nasal polyps and chronic sinusitis, and certainly help direct further management, including endoscopic sinus surgery.

What is the treatment?

For the family physician, treatment starts with an accurate history and examination of the nose. Management can include several aspects (Table 2).

There are a variety of ways to introduce moisture into the nose and perform mechanical rinsing of the nasal cavities to reduce debris and irritants. Topical nasal steroid sprays are the mainstay of treatment for nasal polyps. If the polyps are fairly small in size often a combination of topical nasal steroid sprays and saline rinses is sufficient to control them. Oral prednisone will make nasal polyps disappear in some patients, who will think they had a miracle cure. However, long-term use of oral steroids are associated with so many side-effects that their use in this chronic disease is extremely limited to very few instances throughout the year.

If chronic sinusitis is present, longer courses of appropriate antibiotics (three weeks) can be utilized. Bacteria to be targeted include a wide variety, such as:

- Staphylococcus aureus;
- Gram negative bacteria; and
- Anaerobic bacteria.

Antibiotics would be indicated if the patient experiences more headaches and facial pain, increased purulent postnasal discharge, and increased sinonasal symptoms in general. This

would indicate increased bacterial presence in the sinuses. Topical nasal steroid sprays can of course be continued during the chronic sinusitis exacerbations, since there is a significant amount of inflammation, and not just infection.

Antihistamines and decongestants can help control some symptoms associated with nasal polyps, and improve aeration and drainage of the sinuses as well.

When do I refer to a specialist?

Patients need to be made aware that this is a chronic condition and despite best medical and surgical management, polyps can recur.

Essentially, a referral to an otolaryngologist should be made if there is any question about the diagnosis, if there is a failure to control the symptoms despite adequate medical management, or if there is any concern about possible complications.

In addition to nasal polyps, papillomatous and other neoplasms (even malignancies) can develop in the nose. Therefore, if there is any question as to the nature of the mass, a referral should be made. If there is no improvement in the patient's symptoms (despite adequate medical management that includes steroid nasal sprays,

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Table 2

Management of nasal polyps

- Steaming the nose
- Nasal saline spray and/or rinses
- Topical steroid nasal sprays
- Topical and/or decongestants
- Antihistamines
- Oral or IN steroids
- Antibiotics

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saline rinses and even a course of prednisone) a referral should be made. If there is evidence of complications, including infection, progressive pain, and bleeding, then I believe it is appropriate to send the patient to a otolaryngologist.

What can I tell my patients about surgery?

Endoscopic sinus surgery is a fairly new technique which can encompass removal of the nasal polyps. They are removed with an endoscope, often under television monitor guidance. The endoscope enables the surgeon to have distal magnification and illumination to remove the roots of the polyps directly within the paranasal sinuses themselves, which may contribute to less recurrences of polyps. This surgery is the most common type performed in a day care setting, with a local or general anesthesia. Surgery provides for pathologic diagnosis, and is generally offered to the patient after medical management has failed.

What about allergy testing?

The role of allergy investigation and treatment in the presence of nasal polyps is yet to be perfectly outlined.

What are the complications?

The complications of nasal polyps definitely include chronic sinusitis and its various complications. Most distressing complications of nasal polyposis is permanent loss of smell. To understand the impact of the loss of smell, just imagine never being able to enjoy the taste of food again.

It is not known whether nasal polyps actually convert into an inverting papilloma tumour. An inverting papilloma is a benign, but locally aggressive, tumour which looks a bit like a nasal

Take-home message



What we know

- The only sure thing we know about nasal polyps is that they almost always lead to chronic inflammatory, and sometimes bacterial, sinusitis.
- Polyps will ultimately cause chronic inflammation and recurrent sinusitis.
- Most patients should see an allergist as part of their maximal medical management before pondering surgery.

polyp, except it is more papillomatous in appearance.

Nasal polyps can certainly be associated with inverting papilloma, and only a pathologic determination from biopsy can clearly separate the two.

Complications from medical therapy is rather important to mention. Although oral prednisone can “miraculously” shrink nasal polyps, and make them disappear almost completely, the complications of chronic oral prednisone need not be understated as undesirable. However, topical nasal steroid sprays, used even for long periods of time, are extremely safe in the adult population.

The complications for endoscopic sinus surgery are mainly the inability to completely eradicate the symptoms in at least 20% of all cases. Epistaxis is a common, but rarely dangerous, complication.

The rare, albeit possible, complications of endoscopic sinus surgery while performing extensive nasal polyp removal would include:

- catastrophic carotid artery hemorrhage;
- orbital injury, including blindness; and
- cerebral spinal fluid leakage.

What is the prognosis?

I tell my patients that nasal polyps are like weeds. They are almost impossible to eradicate completely. The aim of management, therefore, is to control symptoms.

If patients are minimally symptomatic, treatment can be minimal. If patients are more severely symptomatic, the treatment offered would be more extensive. Neither medical nor surgical treatments guarantee polyps from returning, but rather are offered to improve the quality of the patient's life. [CME](#)

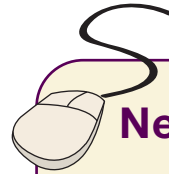
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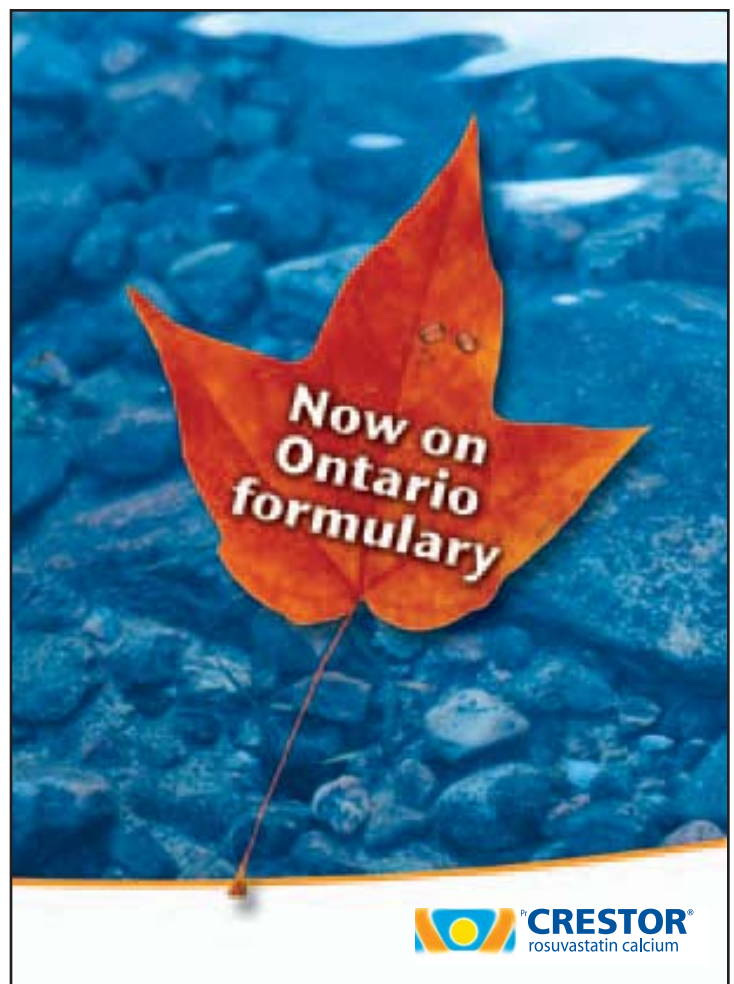


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