

Nasal Polyps and Chronic Obstructive Pulmonary Disease—An Oft Overlooked Association

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Keywords

nasal polyps, chronic obstructive pulmonary disease, endoscopic sinus surgery, asthma

A 64-year-old man presented with bilateral nasal blockage for the past 7 years. Further history showed that he was a chronic smoker and on treatment with steroid metered dose inhaler for chronic obstructive pulmonary disease (COPD). He had never been seen by an otorhinolaryngologist before his current presentation. Examination was unremarkable except for huge bilateral intranasal polyps (Figure 1, arrows), associated with

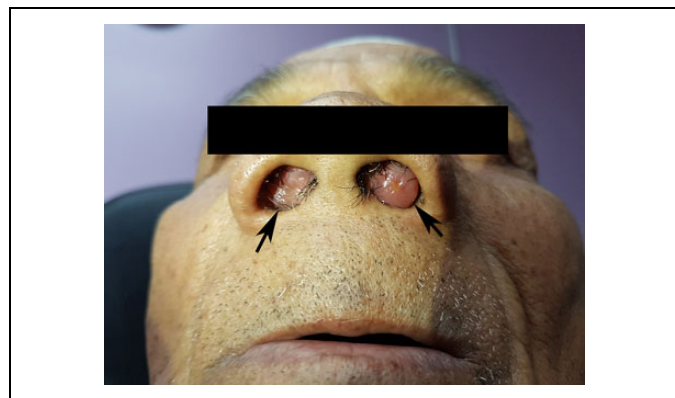


Figure 1. Huge bilateral nasal polyps protruding from the nostrils.



Figure 2. Computed tomography of paranasal sinuses (coronal view) showing bilateral maxillary sinusitis.

pansinusitis on computed tomography of paranasal sinus (Figure 2, asterisks). After poor response following medical polypectomy (combined intranasal steroid, systemic steroid, and oral clarithromycin for 6 weeks), the patient underwent uneventful endoscopic sinus surgery under general anesthesia. Postoperatively, he was well and was discharged the next day. On serial follow-up, his symptoms improved.

Nasal polyps are pedunculated masses of edematous mucus membranes arising in the setting of chronic sinonasal inflammation. Projecting into the nose, these masses cause blockage and restricted airflow. Treatment generally involves medical therapy to relieve the nasal obstruction, restore olfaction and taste, and improve sinus drainage. The mainstay of medical treatment is topical nasal steroids as well as macrolides and short-term use of systemic steroids when necessary. These medications not only improve symptoms but also olfaction. Other modalities include leukotriene receptor antagonists and certain biologic therapies, such as anti-interleukin 5. Surgical therapy, namely endoscopic sinus surgery, is an adjunct to medical therapy in refractory cases.

Studies have demonstrated that lower and upper airway diseases often coexist.¹ While coexistence of bronchial asthma and chronic rhinosinusitis (CRS) is well established, the link between COPD and CRS is poorly understood. Chronic rhinosinusitis with nasal polyps is associated with lower airway flow limitation, even in patients without lung pathology.² Conversely, up to 75% of patients with COPD have concomitant nasal symptoms, which may complicate the management of their primary disease.³ An “allergic phenotype” of COPD has been

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associated with increased respiratory symptoms and nasal mucosal inflammation that provides a fertile field for growth of nasal polyps. The connection between COPD and CRS has been attributed to simultaneous irritation of the lower and upper airways when tobacco smoke is exhaled.¹ Tobacco smoke has a deleterious effect on the nasal mucosa, causing impairment of mucociliary function, sinonasal mucosal inflammation, and nasal symptoms. Nevertheless, more studies are required to understand the mechanisms resulting in the co-occurrence of COPD and CRS.

In the management of asthma, physicians are recommended to evaluate for coexisting allergic rhinitis and CRS. Similarly, when treating COPD, CRS and nasal polyps should also be evaluated. Therefore, a meticulous nasal examination is required in all patients with lower airway conditions. The clue to their symptoms may be just be under their noses!

Declaration of Conflicting Interests

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