

LETTERS

Mucous retention cysts of the paranasal sinuses

Dear Editor,

The paranasal sinuses are air-filled cavities covered by a thin mucous membrane that adhere to the periosteum. Retention cysts in paranasal sinuses are common, incidental finding at radiographic examinations and are reported to occur in between 1.4% to 9.6% of the general population¹. Most mucous retention cysts (MRC) are asymptomatic²; however, when they cause symptoms like headache, periorbital or facial pain, repeated infections of the paranasal sinuses, and/or nasal obstruction, surgical treatment may be necessary³. In the literature, retention cysts have only been reported in the maxillary sinuses (MS).

In a retrospective study we investigated the occurrence of MRCs for all paranasal sinuses and analyzed their location, number, and size of cysts, as well as indications for treatment and treatment modalities when required. Computed tomographic scans of the paranasal sinuses for 510 patients, from the Okmeydanı Training and Research Hospital, from November 2010 to December 2011, were retrospectively reviewed by a certified radiologist. Medical records of these patients, endoscopic nasal examinations, size of each retention cyst, and the ratio of cyst size to sinuses, were measured and evaluated.

Overall, the incidence of MRCs was 29.4% (150 cases). The mean age was 37.9 years (17-76), and male-female ratio was 1.7:1. Twenty-five patients (16.6%) demonstrated bilateral cysts in the MS, while there were 118 (78.6%) unilateral cases, 54 (45.8%) with MRC in the right MS, and 64 (54.2%) in the left MS. There was 1 patient with a cyst in right sphenoid sinus (0.6%), and another with a cyst in left sphenoid sinus (0.6%). There were two cases of MRC in right frontal sinus (1.3%). There were two cases with cyst in right ethmoid sinus (1.3%), and one with a cyst in left ethmoid sinus (0.6%). Some patients had cysts in more than one sinus. In this study, incidence of patients presenting with MS retention cyst was 28.03%; 0.39% for frontal and sphenoid sinus retention cyst, and 0.58% for ethmoid sinus retention cyst. Mean size of cyst in MS was 1.56 cm. Nine cases underwent surgery: three for obstruction of MS ostium, one for hemifacial pain and tenderness, radiating to the posterior teeth, one for a right frontoethmoidal mucocele that caused pressure on the orbit, and three for dental symptoms, caused by MRC located in the MS. All patients were treated with endoscopic sinus surgery.

Patients are on regular follow-up, although after three years most asymptomatic MRCs showed no significant change in size; a small portion increased gradually and few disappeared spontaneously.

The prevalence of MRCs was 29.4% in our study population. The majority of MRCs were asymptomatic, and medical treatment is not necessary. Though conditions requiring referral and management should not be ignored, it is not necessary to refer every instance of mucous retention cyst to an ENT specialist.

References

1. Rodrigues CD, Freire GF, Silva LB, Fonseca da Silveira MM, Estrela C. Prevalence and risk factors of mucous retention cysts in a Brazilian population. *DentomaxillofacRadiol.* 2009; 38: 480-483.
2. Wang JH, Jang YJ, Lee BJ. Natural course of retention cysts of the maxillary sinus: long-term follow-up results. *Laryngoscope.* 2007; 117: 341-344.
3. Koki S, Kiyoshi Y, Yutaka S, Tooru I. Three cases of sphenoid sinus retention cyst of the headache-including a discussion of surgical approaches to the sphenoid sinus. *Otolaryngol Head Neck Surg (Tokyo).* 2005; 48: 174-181.

Conflict of Interest

Authors declare no financial interest and no other conflict of interest.

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