Rhinolithiasis*

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SUMMARY *Rhinoliths are mineralized masses located in the nasal cavity. In this report, 12 patients with rhinolithiasis who were operated at the 2nd ENT Clinic of Ankara Numune Hospital are presented. The most frequently seen symptom is nasal obstruction, which has been seen in 9 patients. The disease most frequently seen in association with rhinolithiasis is chronic sinusitis. All masses have been extracted intranasally.*

Keywords: rhinolithiasis, nasal obstruction

INTRODUCTION

Rhinoliths are mineralized masses located in the nasal cavity (Stoney et al., 1991). They consist mainly of calcium- and magnesium carbonates and phosphates (Deyasi, 1968). The first cases were reported nearly 350 years ago (cf., Carder and Hill, 1966). Most of the patients come from low-income groups and the number of reported cases is declining (Eliachar and Schalit, 1970). Rhinolithiasis is generally unilateral and if present, symptoms may vary widely. Asymptomatic rhinoliths can be discovered during a routine diagnostic work-up (Appleton et al., 1988).

MATERIAL AND METHODS

From January 1988 thru December 1995, 12 patients with rhinolithiasis were operated on at our clinic. There were 8 men and 4 women with a mean age of 30 years (range: 8-57 years). The most frequent symptom was nasal obstruction; two patients were asymptomatic. The only symptom of one particular patient, who was referred to our clinic because of impacted cerumen, was purulent secretion from the punctum. The symptoms of the 10 symptomatic patients are presented in Table 1. Two children and a mentally retarded patient were operated under general anaesthesia, the remaining 9 patients were operated under local anaesthesia. In 5 patients, which were diagnosed after 1991, nasal endoscopy was used for removal.

Table 1. The symptoms of 10 patients (Two patients were asymptomatic).

nasal obstruction	9
nasal discharge	7
headache	6
epistaxis	4
halitosis	3
purulent discharge from the punctum	1

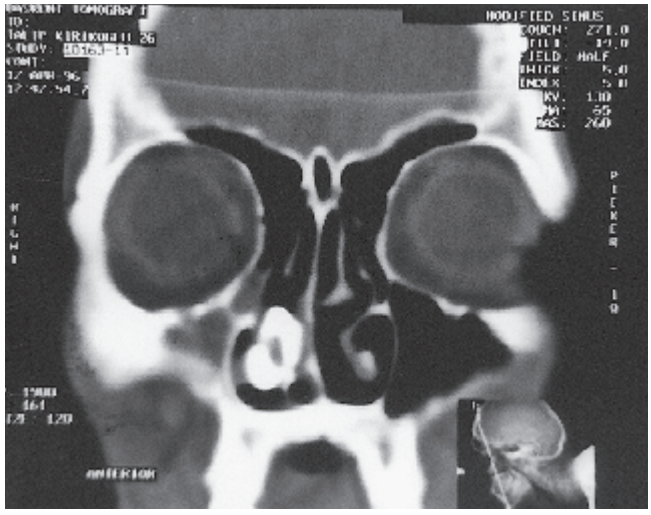

Figure 1. CT scan showing rhinolith located in the right nasal cavity.

RESULTS

Sizes of the rhinoliths were between 1.2-4.5 cm. In 4 out of 12 patients intra-operatively severe epistaxis was seen and all of the them were controlled with anterior packs. Sectioning of the lesion revealed recognizable foreign body nidi in 6 cases, which were sponge, beads, a piece of toy, wood, paper and cotton. There was not any recognizable foreign body nidus in the remaining 6 cases.

DISCUSSION

Rhinoliths vary in size and shape, from small bodies to massive growths, and may invade the adjacent structures (Perrone, 1968). The formation of a rhinolith is thought to result from the long-standing presence of a nidus, in order to explain the deposition of salts. These nidi have been classified as “endogenous” and “exogenous” (Eliachar and Schalit, 1970). There was not

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any recognizable foreign body nidus in half of our cases. Endogenous nidi might have played a role in some of these cases. Although Eliachar and Schalit (1970) report that rhinoliths are common in females, 66% of our cases were male.

Patients may be asymptomatic or have different symptoms. The only symptom of one patient has been purulent discharge from the punctum. To our knowledge it has not been reported as a presenting symptom of rhinolithiasis before.

Stoney et al. (1991) conclude that nasal endoscopy is an ideal method to use in the diagnosis of rhinoliths. Plain X-rays can be reported as being normal. The size of the mass and its relations to adjacent structures can be seen by CT (Figure 1). Calcified polyps, osteoma, osteomyelitis, and carcinoma should be excluded from the differential diagnosis (Carder and Hill, 1966). Treatment is total extraction. Although all of the rhinoliths in our series were removed intranasally, an external approach may be necessary for very large ones.

REFERENCES

1. Appleton SS, Kimbrough ER, Engstrom HIM (1988) Rhinolithiasis: A review. Oral Surg 65: 693-698.
2. Carder HM, Hill JJ (1966) Asymptomatic rhinolith: A brief review of the literature and case report. Laryngoscope 76: 524-530.
3. Deyasi S (1968) Rhinolith. J Laryngol Otol 82: 481-484.
4. Eliachar I, Schalit M (1970) Rhinolithiasis: Report of eight cases. Arch Otolaryngol 91: 88-90.
5. Perrone JA (1968) An unusual rhinolith. Laryngoscope 78: 279-280.
6. Stoney P, Bingham B, Okuda I, Hawke M (1991) Diagnosis of rhinolith with rigid endoscopy. J Otolaryngol 20: 408-411.

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