The Journal of Laryngology and Otology
August 1998, Vol. **112,** pp. 775–776

An unusual presentation of a nasal septal abscess

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Abstract
Nasal septal abscess is a rare complication of septal haematoma. Nasal obstruction and, less frequently, pain are the usual presenting features. We report a case of a nasal septal abscess in a 21-year-old female patient who developed a naso-oral fistula. To our knowledge this is the first report of such an unusual presentation of a septal abscess. The aetiology, pathogenesis and management of septal abscesses are discussed.

Key words: Nasal septum; Abscess; Fistula

Case report

A 21-year-old female presented with a one-week history of a foul-tasting discharge from beneath her upper lip following a single punch injury to her nose three weeks previously. Though she developed nasal obstruction soon after the injury, it had improved after the onset of the discharge. She had been administered a course of oral amoxycillin by her general practitioner without much benefit. On examination, her nasal bridge was slightly widened, and the nasal septum was swollen, yielding and tender on probing. On raising the upper lip a sinus was seen in the gingivo-labial sulcus, slightly to the left of the midline. When gentle pressure was applied by pinching the nose, pus was expressed through this opening, thereby confirming it to be a fistula communicating with the septal swelling. The patient was otherwise well, apyrexial, and a full blood count was normal.

The patient was commenced on intravenous cefuroxime and metronidazole, and the abscess was incised under a general anaesthetic later that day draining 4 ml of pus (which grew microaerophilic streptococci sensitive to penicillin). Most of the septal cartilage was found to be necrosed except anteriorly. The fistula communicated with the abscess close to the anterior nasal spine, and its lining was removed by curettage. BIPP packing was inserted into both nasal fossae and kept *in situ* for 48 hours. The patient was discharged with a five-day course of penicillin V, and when reviewed after four weeks, the nasal mucosa had healed with minimal residual swelling and the naso-oral fistula had closed. There was no saddle nose deformity but in view of the likelihood of this developing, follow-up arrangements were made.

Discussion

Nasal septal abscesses are rare and may be defined as 'a collection of pus between the cartilaginous or bony septum and its normally applied mucoperichondrium or mucoperiosteum' (Ambrus *et al.*, 1981). They usually follow infection of a nasal septal haematoma.

Trauma, often minor, is the commonest cause of a nasal septal abscess, and less frequently it is associated with nasal surgery. Nasal furuncles (Larchenko, 1961), acute ethmoiditis (Beck, 1945), acute sphenoiditis (Collins, 1985), influenza, and dental disease and infections (da Silva *et al.*, 1982) are rare causes.

Late diagnosis is associated with an increased incidence of serious complications, in particular, intracranial infections and cosmetic nasal deformities, and therefore, early diagnosis and prompt treatment are essential. Spread of infection to the cranium may lead to meningitis (Eavey *et al.*, 1977), brain abscess and subarachnoid empyema (McCaskey, 1951), which become increasingly common if presentation is delayed beyond two to three weeks.

Our patient developed a naso-oral fistula from the septal abscess and interestingly this was the reason why she sought medical attention. At presentation she was not troubled by nasal obstruction as the abscess had been intermittently discharging through the fistula. This complication is very unusual and to our knowledge has not been reported in the English literature before.

Prompt treatment is paramount to the prevention of complications. Although needle aspiration, reducing the pressure of the abscess and allowing diagnostic culture, is advocated by some (Ambrus *et al.*, 1981), it was not performed on our patient since pus was available for culture from the fistula and it was felt that the abscess was relatively small. Broad spectrum intravenous antibiotics, to include anaerobic cover, should be commenced immediately, and at least one to two hours prior to surgery to attain adequate CNS levels and prevent bacteraemia. Incision and drainage may be performed under a local or general anaesthetic, a vertical incision made over the point of maximum fluctuance. All necrotic tissue and cartilage, granulations and blood clot must be removed and pus sent for culture and sensitivity. Whether a drain is needed is debatable, but re-collection occurs in up to 15 per cent, and the use of dissolvable quilting sutures to appose the mucoperichondrium to cartilage is recommended by some (Canty and Berkowitz, 1996). Nasal packing should remain for at least 48 hours during which time intravenous

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Accepted for publication: 24 May 1998.

antibiotics should continue, followed by a five- to seven-day course of oral antibiotics adjusted to the results of the culture and sensitivity.

If a fistula is associated with the abscess it would appear that simply removing the lining of the tract by curettage encourages closure.

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