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Alar cartilage haematoma

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Abstract
We present a previously undescribed site of a subperichondrial haematoma – the alar cartilage. Two children presenting acutely, following trauma, with the clinical appearance of a 'blueberry' within the nasal vestibule are described. We recommend early surgical drainage of this lesion, as delay in definitive treatment may give rise to a cosmetic deformity.

Key words: Nose; Cartilage; haematoma

Introduction

Whereas haematomas of the nasal septum, upper lateral nasal cartilage, pinna and larynx are all well recognized causes of cartilaginous necrosis, haematomas of the alar cartilage have not been previously described. In this paper we present two such cases.

When cartilage is traumatized, adjacent blood vessels within the perichondrium are torn. The collection of blood between the cartilage and the overlying intact perichondrium gives rise to a subperichondrial haematoma. Subsequently, the cartilage is deprived of its nutritional support and may quickly become resorbed, even in the absence of infection. The influx of tissue collagenases contributes to cartilage resorption (Fry, 1969).

If a haematoma becomes infected, an abscess develops which produces rapid resorption of necrotic cartilage. When cartilage is lost, whether because of haematoma or abscess formation, it is replaced with fibrous tissue. Scar retraction and loss of support leads to subsequent deformity (Hinderer, 1971).

Case reports

Case 1

A six-year-old girl was referred from the casualty department with a history of nasal injury following a fall downstairs one week previously. On initial inspection there was an obvious fullness over the region of the left alar cartilage. Anterior rhinoscopy showed a smooth, fluctuant swelling confined to the left alar cartilage (Figure 1 a–c). There was no associated septal or nasal bone deformity. A diagnosis of alar cartilage haematoma was made.

Under general anaesthetic a left intercartilaginous incision was made. An organized haematoma and small fragments of necrotic alar cartilage were evacuated. A nasal pack was left *in situ* for 24 hours, a course of antibiotics administered and the patient reviewed two weeks later.

There was no evidence of any recurrence of the haematoma although she was noted to have a minimal deformity of the alar cartilage which persisted.

Case 2

A four-year-old boy was referred from the accident department with a suspected septal haematoma following a fall earlier the same day. Examination revealed a blue swelling in the left nasal vestibule which was separate from the septum.

This was drained under general anaesthetic via a rim incision and the vestibule was packed for 24 hours following surgery. There were no subsequent complications and the nares appeared symmetrical on follow-up.

Discussion

In a study by Blehova (1985) of 241 children with nasal injury 25 (10.3 per cent) of them developed septal haematoma or abscess. In a paper on nasal septal injury in children Olsen *et al.* (1980) advocated examination of the nose for thickening along the nasal septum and upper lateral cartilage and suggested that the presence of a blue or red discoloration in such areas might indicate the presence of a haematoma. It seems unlikely therefore, that if both the septum and the upper lateral cartilage are prone to the development of haematomas, that the alar cartilage should be exempt. However, we were unable to find any previously recorded cases of alar cartilage haematomas.

The diagnosis like that of a septal haematoma, is dependent on the awareness of its existence by the clinician and the knowledge that, if left untreated, it may result in an unacceptable cosmetic deformity. Nasal obstruction may also ensue, as a very small change in the width of the nostril will markedly affect air flow. The clinician is then faced with the difficult task of alar cartilage reconstruction. Fortunately the delay in treatment of *Case 2* did not give rise to any major complications.

Drainage of the haematoma is mandatory and, as our experience demonstrates, may be achieved by intercartilaginous or rim incisions.

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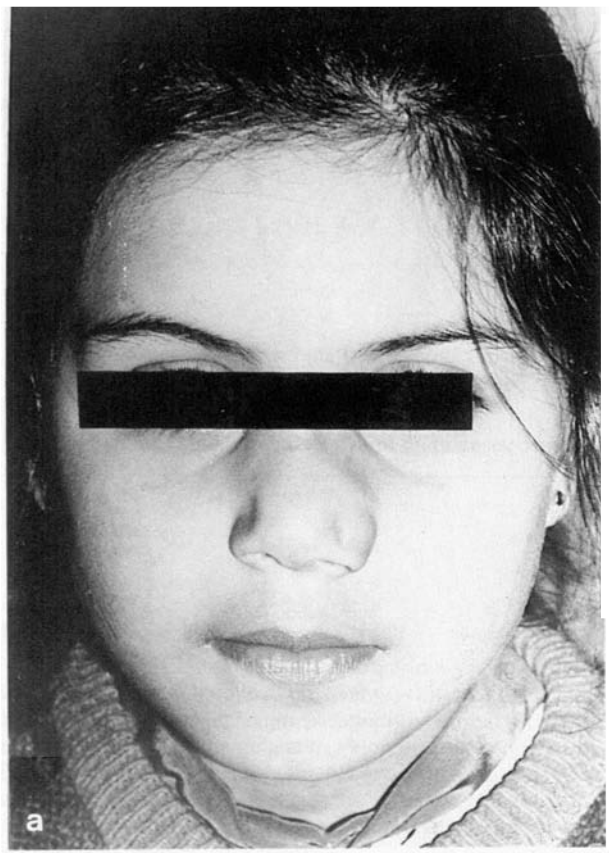

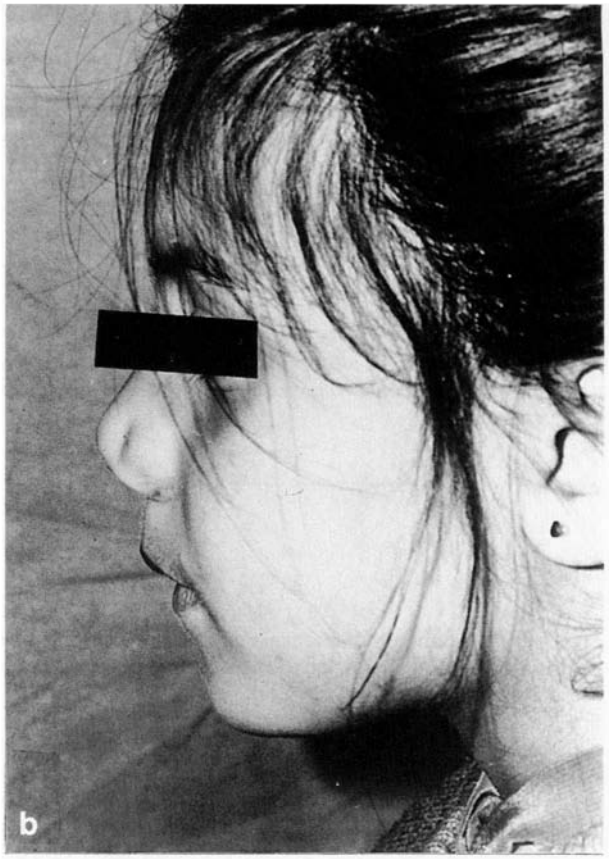

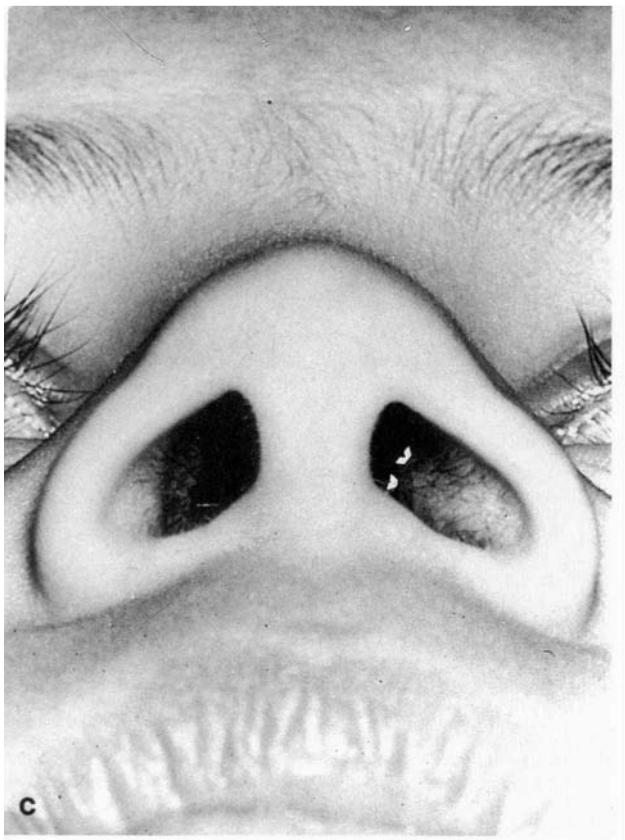

FIG. 1

Case 1: Alar cartilage haematoma. (a) Pre-op view – face; (b) pre-op view – left lateral; (c) alar view – arrows outline haematoma.

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