The Journal of Laryngology & Otology
June 2002, Vol. **116,** pp. 467–469

Hairy polyps of the nasopharynx

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Abstract
Hairy polyps are rare tumours that can occur anywhere in the body. They are especially rare in the pharynx. We report two cases of hairy polyps which originated from the nasopharynx. One presented with intermittent obstruction of the airway and the second presented as a visible pedunculated mass protruding from the mouth of a neonate.

Key words: Airway Obstruction; Teratoma; Nasopharynx; Infant

Introduction

Hairy polyps are rare non-neoplastic tumours that can occur anywhere in the body. They are especially rare in the pharynx, arising when there from the nasopharynx. They present at, or shortly after, birth with intermittent respiratory obstruction, stridor or difficulties feeding. On examination they resemble a pedunculated sausage-shaped lesion.

The following two cases of hairy polyps classically illustrate the ways in which they may present in infants.

Case reports

Case 1

After birth, a term female was admitted to the special care baby unit with stertor, intermittent upper airway obstruction and problems suckling. The infant was born to a healthy Caucasian mother by normal delivery. The antenatal history was unremarkable.

Clinically she appeared well, apart from nasal flaring, subcostal recession, a tracheal tug and noisy inspiratory breathing. Her breathing was noted to be louder and more laboured when she lay prone.

On examination the infant was noted to have micrognathia and glossoptosis, which were thought to be the cause of her respiratory distress. A nasogastric tube was passed with difficulty and feeds commenced. A nasal endotracheal tube was inserted and she settled well. After 24 hours oxygen was no longer required and the tube was removed after six days. Following this she appeared to tolerate her prone position much better. She continued to have periods of floppiness, cyanosis and stertor, but these appeared to settle. She was breast-feeding well and was allowed home.

She was reviewed by the paediatricians 10 weeks later, after concerns about her noisy breathing. On examination she appeared well. She showed no evidence of respiratory compromise. A pale sausage-like protrusion was visible in her oropharynx, emerging from the nasopharynx, just behind the soft palate (Figure 1). This was visible on plain X-ray.

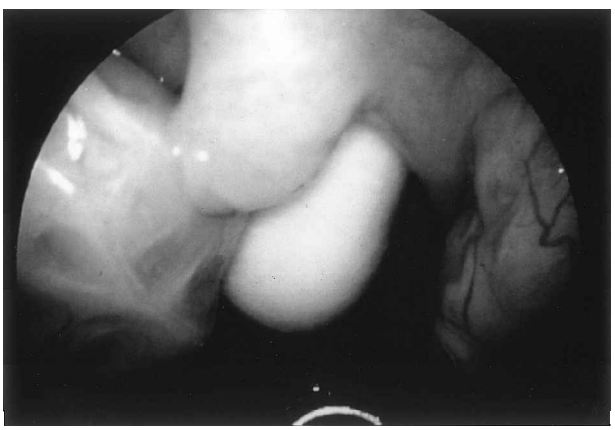

Fig. 1
Pale sausage-shaped lesion visible in oropharynx.

These findings were confirmed on computed tomography (CT) performed under general anaesthesia. The lesion was examined under the same anaesthetic and found to have a broad pedicle (3×1 cm in diameter with a waist 0.4×2 cm) arising from the left lateral wall of the nasopharynx just above the upper pole of the tonsil. The lesion was excised with bipolar diathermy. Blood loss was minimal. Her respiratory difficulties completely resolved and she made a full recovery.

Case 2

A term female was born by emergency Caesarian section after failure to progress. Following delivery a 6×1.4 cm pedunculated sausage-shaped lesion was visible protruding from her mouth, next to her tongue (Figure 2). On occasions this disappeared and it looked as though she had swallowed the lesion. She had intermittent stertor and episodes of coughing and cyanosis during feeding. Examination under anaesthetic confirmed a sausage-shaped mass with a narrow pedicle which was attached to the lateral nasopharyngeal wall, above the upper pole of the

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Accepted for publication: 4 December 2001.

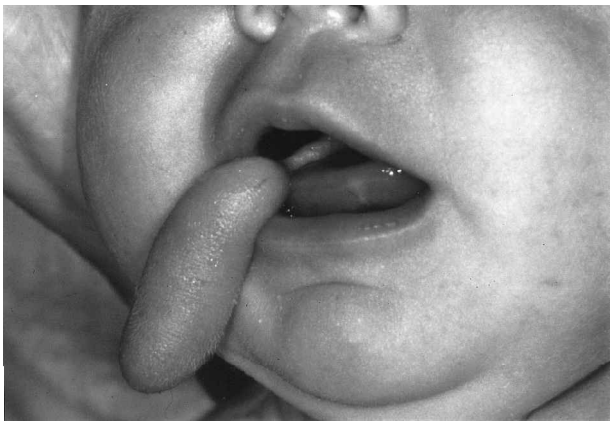

FIG. 2
Pedunculated lesion protruding from mouth.

left tonsil. The lesion was excised by bipolar diathermy to the pedicle (Figure 3). She made a quick and uncomplicated recovery.

Discussion

Hairy polyps are rare.[1,2] They are most commonly seen in neonates, although they have been reported in adults.[3] Female infants are six times more commonly affected than males.[4] There is no evidence to indicate a familial incidence.[5] They most commonly arise from the nasopharynx, arising from the superior aspect of the soft palate or lateral pharyngeal wall, by a thin pedicle. Macroscopically they consist of a polypoidal mass arising from a thin stalk. Microscopically the mass consists of a core of mesodermal structures such as fat, smooth or skeletal muscle and cartilage, which is surrounded by stratified squamous epithelium with hair follicles. They classically present at, or shortly after, birth with either an asymptomatic sausage-shaped mass or with respiratory obstruction.[6,7] This is characteristically intermittent, with stertor developing when the polyp falls back into the larynx, causing a 'ball-valve' effect with resulting cyanosis. They may also present with feeding difficulties as the lesion may prolapse into the upper oesophagus, resulting in attacks of coughing or gagging.[8] Airway obstruction may occur if the polyp becomes impacted in the larynx and deaths have been reported.[9,10] The diagnosis of a hairy polyp is based on clinical findings and further investigations are not usually warranted. Treatment is by surgical excision at the pedicle base. No cases of auto-amputation have been described. There have been no recorded cases of metastatic spread. Only one case of recurrence has been described after excision.[11]

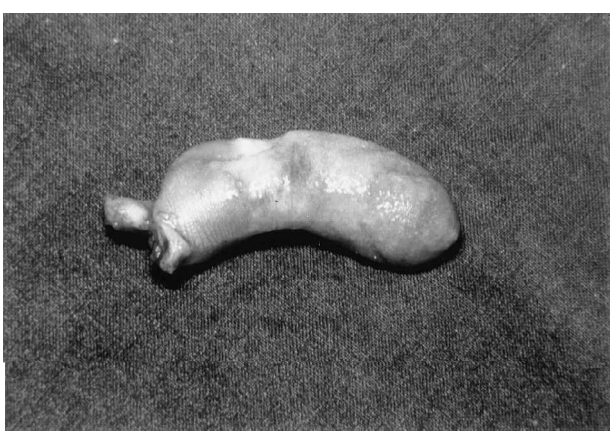

FIG. 3
The excised specimen.

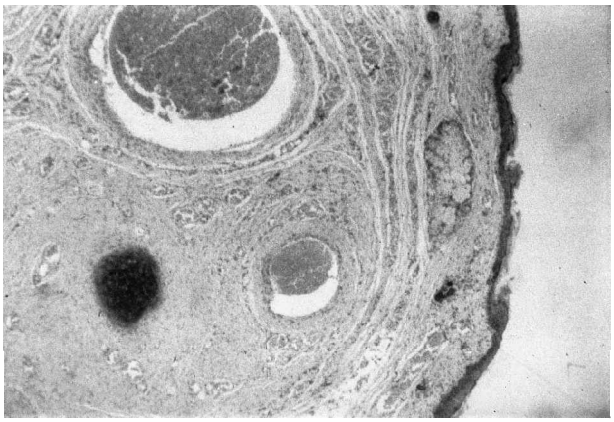

FIG. 4
Hairy polyp consisting of stratified squamous epithelium with normal skin appendages, surrounding an adipofibrous connective tissue core (H & E; × 5)

In both the above cases, histopathology showed both lesions to consist of a stratified squamous epithelium with normal skin appendages, such as pilosebaceous glands surrounding an adipofibrous connective tissue core with central nodules of cartilage (Figures 4), thus confirming a hairy polyp.

There is some confusion over the classification of these lesions. In the past hairy polyps have variously been described as teratomas, hamartomas, dermoids or choristomas.[11,12] They are most widely classified as teratomas, but this is not strictly correct, as by definition, teratomas consist of all three germinal layers and hairy polyps consist of a mesodermal core surrounded by ectoderm.

They have also been described as hamartomas. The term hamartoma was first introduced by Albrecht in 1904.[13] It is derived from the Greek 'harmartanein' to make an error. It refers to a non-neoplastic tumour-like mass which may be derived from any of the three germinal layers which is characteristic of that tissue or organ. Hairy polyps are not true hamartomas because skin appendages are not normal epithelial structures of mucous membranes. Some authors classify them as solid dermoid tumours. Dermoids consist of two germinal layers – ectoderm and mesoderm, but with mesoderm predominating.

Strictly speaking, hairy polyps are probably best classified pathologically as choristomas although as previously stated, this is not the accepted method in the literature. Choristomas are formed of histologically normal tissue which is present in a location foreign to that in which it is normally found. Despite hairy polyps consisting of a core of mesoderm surrounded by ectoderm the classification most widely accepted in the literature remains, perhaps somewhat confusingly, as a type of teratoma.

In summary, the diagnosis of a hairy polyp should be considered in any infant with a history of intermittent airway obstruction. They are rare benign tumour-like malformations which may be visible as a pedunculated oropharyngeal mass. The diagnosis is made clinically typically at, or shortly after, birth. Treatment consists of surgical excision.

https://doi.org/10.1258/0022215021911095 Published online by Cambridge University Press

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Mr P. Bull takes responsibility for the integrity of the content of the paper.
Competing interests: None declared

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https://doi.org/10.1258/0022215021911095 Published online by Cambridge University Press