Nasopharyngeal hairy polyp in an infant with apnoeic spells

A four week old (born at 34 weeks gestation) boy presented in Accident and Emergency with a 4 day history of cough, runny nose, and difficulty with breathing. On examination, the child was cyanotic, had shallow breathing with chest recession and nasal flaring, and suffered from recurrent apnoeic spells. No stridor was noted. There was good air entry to both lungs and occasional crackles. The rest of the examination was unremarkable. Chest radiograph was normal. Blood gas revealed a pH of 6.9, pO2 of 10 kPa, pCo2 of 12 kPa and a Base Excess of -13. An initial diagnosis of Respiratory Syncitial Virus-related bronchiolitis was made. The child was admitted to the PICU for intubation and CPAP. During intubation a lump was noted in his pharynx. A CT scan of head and neck was requested. CT scan demonstrated a low attenuation mass in the nasopharynx. On review of the images an MRI scan was done for further characterisation. A diagnosis of hairy polyp of the nasopharynx was made. The child had surgery the following day for excision of polyp. Post operative recovery was unremarkable. Histology confirmed it to be a hairy polyp.

Discussion:

Hairy polyps are a rare benign tumour that can occur anywhere in the body (1). They are particularly unusual in the pharynx, but when they do occur there, they most commonly arise as a pediculated mass from the lateral wall of the nasopharynx or the superior aspect of the soft palate (1). These lesions are rare, with an incidence of less than 1:40,000 live births and only 137 cases reported. However, despite their rarity, they are the most common congenital nasopharyngeal mass (2-4). Hairy polyps of the pharynx are present at or shortly after birth with respiratory distress or feeding difficulties (2). Depending on their size, which ranges from 0.5-6cm, and location of the lesion, they might be detected as a incidental finding in late childhood or in adulthood (1-4). They might also present as a visible mass in or protruding from the mouth. Visualisation can be difficult because of the location of the mass and the presence of an endotracheal tube (5). There is a long differential diagnosis for congenital nasopharyngeal mass. On imaging hairy polyps are characterised as a polypoid lesion consisting mainly of lipid with a usually fibrous stalk and no intracranial or intraspinal extension (6). In our case, the low attenuation seen on CT and high precontrast T1 signal on MRI both characterised a predominantly lipid-containing lesion. The lesion’s stalk demonstrated attenuation and low T1/T2 signal consistent with fibrous tissue. There was slight enhancement post gadolinium as expected. The tissue characteristics excluded lesions such as hemangioma, neuroblastoma, embryonic cysts of lingual, throglossal or thyolic origin. There was no intracranial or intraspinal connection which excluded a pharyngeal pituitary remnant, glioma, meningocele, neururenteric cyst, craniopharyngioma or Rathke cyst.
On imaging alone the lesion could not be differentiated from a teratoma, hamartoma or dermoid (2). Hairy polyps are composed of a mesodermal core with and ectodermal lining. The mesodermal core typically consists of fibroadipose tissue, although it might include muscle or cartilage (5). The ectodermal lining consists of mature stratified squamous epithelium with skin appendages (1). Hairy polyps lack tissue of endodermal origin (2). There is no standard classification of hairy polyps in the literature. It has been classified as a teratoma, harmatoma, dermoid cysts and choristoma (7). A choristoma is a benign mass consisting of histologically normal tissue in an anatomically abnormal location (1, 7). Choristoma is therefore the most accurate classification of the hairy polyp (5) but this gives no indication of their aetiology (4). The embryogenesis of pharyngeal choristomas is unclear (5). In 10% of cases they are associated with other first or second branchial arch malformations, and in another 10% of cases they are associated with a cleft palate, but not a cleft lip (2). Choristomas of the head and neck are best treated by simple surgical excision at the pedicle base. (1,7,8). The definitive diagnosis is made by histopathology. Consistent with their classification as benign lesions, there have been no reports of recurrence after complete excision. (7)

**Differential Diagnosis List:**
- Nasopharyngeal polyp

**Final Diagnosis:** Nasopharyngeal polyp

**References:**


Description: Plain CT shows fat density mass in the nasopharynx with increased density central area suggestive of the stalk. Origin:
Figure 2

Description: Sagittal fat suppressed post contrast T1w and Sagittal T2w image shows mass in the nasopharynx extending into the oropharynx. Note the suppression of the fatty element on the post contrast image with enhancement of the stalk. Origin:
Description: Axial plain T1-weighted image showing high signal in the nasopharynx suggestive of fatty intensity Origin:
Figure 4

Description: Coronal plain T1-weighted image shows high signal in the nasopharynx mass suggestive of fatty intensity. Origin: