International Journal of Pediatric Otorhinolaryngology Extra 9 (2014) 84–87

Contents lists available at ScienceDirect

International Journal of Pediatric Otorhinolaryngology Extra

journal homepage: www.elsevier.com/locate/ijporl

Case Report

Nasopharyngeal choristoma: An unusual and rare cause of acute respiratory distress in the newborn. Case series and review of the literature

Gurdeep S. Mann [a], Manraj K.S. Heran [b], Marcela Fandiño [c], Lauren N. Ogilvie [c], Frederick K. Kozak [c,*]

[a] Department of Pediatric Radiology, Alder Hey Children's Hospital, Liverpool, UK
[b] Department of Radiology, BC Children's Hospital, Vancouver, Canada
[c] Division of Pediatric Otolaryngology, BC Children's Hospital, Department of Surgery, University of British Columbia, Vancouver, Canada

ARTICLE INFO

Article history:
Received 3 February 2014
Accepted 7 March 2014

Keywords:
Choristoma
Nasopharynx
Newborn
Respiratory distress

ABSTRACT

To describe three cases of newborn acute respiratory distress caused by a nasopharyngeal choristoma. The cases presented include the radiological, surgical, histological and historical perspective of this entity. Retrospective chart review of three cases and review of the literature. Three cases of nasopharyngeal choristoma are reported each presenting with neonatal respiratory distress during the first day of life. All cases were assessed initially with cross-sectional imaging (CT or MRI) and subsequently confirmed on nasopharyngoscopy/laryngoscopy and surgically removed. Nasopharyngeal choristoma is a rare congenital nasopharyngeal mass which may present with rapid onset of acute upper airway obstruction by virtue of its relative size and anatomic position.

1. Case 1

A newborn female, 36 weeks gestation had initial Apgar scores of 7, 9 and 9 presented with profound central cyanosis during breast-feeding in the first hour of life. Supplemental oxygen was required to maintain saturations above 95%. Clinical examination revealed a soft, pink, mobile pedunculated lesion posterior to the soft palate, immediately to the left of the uvula (Fig. 1). On oral examination, which elicited a gag reflex, the mass prolapsed further into the pharynx resulting in upper airway obstruction. Flexible endoscopy confirmed these findings.

The patient was intubated and assessed with MRI under general anesthesia. MRI confirmed a well circumscribed T2 isointense midline polypoid mass (arrow) with a rim of low signal (Fig. 2a and b). She was immediately transferred to the operative suite and underwent transoral surgical resection. The lesion was attached by a wide stalk at the junction of the posterior aspect of the soft palate and posterior tonsillar pillar. Excision was accomplished by monopolar cautery without complication. Postoperative recovery was uneventful (Fig. 3).

Histopathological evaluation revealed hyaline cartilage, fibroblasts and seromucinous glands, surrounded by non-neural tissues and adnexal tissues with a deep layer of adipose and fibrous tissue. These features were consistent with a diagnosis of choristoma (Fig. 4).

2. Case 2

A 41 week gestation newborn female with an unremarkable antenatal history was delivered by forceps. Apgar scores were 7 and 9. Ten minutes after delivery the patient suffered two brief episodes of acute respiratory distress with upper airway obstruction and central cyanosis. Chin lift maneuver and the application of supplemental oxygen by face mask reversed the cyanosis.

Fig. 1. Case 1: Intraoperative per oral view confirming a pink fleshy pharyngeal mass.

Abbreviation: MDCT, multi detector computed tomography.

* Corresponding author at: BC Children's Hospital, K2-184 4480 Oak Street, Vancouver, BC, Canada V6H 3V4. Tel.: +1 604 875 2113; fax: +1 604 875 2498.
E-mail address: fkozak@cw.bc.ca (F.K. Kozak).

http://dx.doi.org/10.1016/j.pedex.2014.03.003
1871-4048/

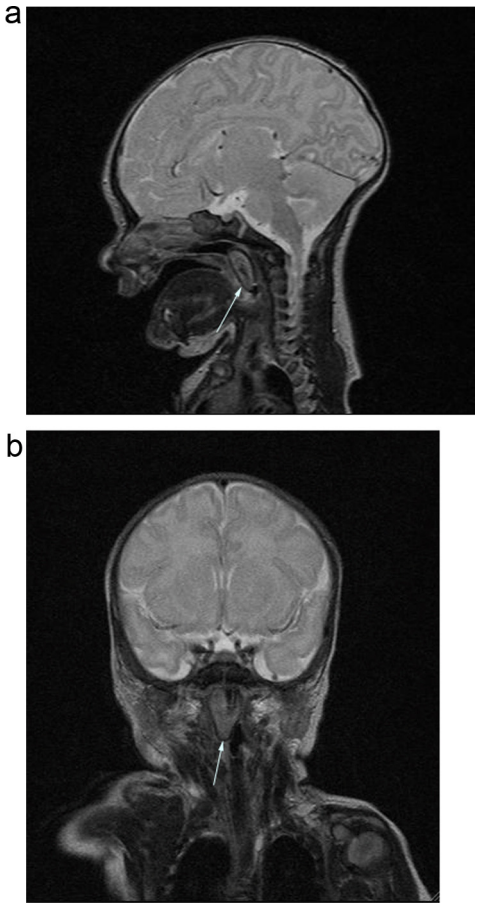

Fig. 2. Case 1: T2-weighted MRI (a) sagittal and (b) coronal confirming the midline choristoma (arrow) occluding the pharynx.

Examination of the oropharynx revealed a large soft, pink, mobile polypoidal mass arising from the left side of the soft palate adjacent to the palatine tonsil.

The patient was intubated and underwent a non-contrast helical CT scan which demonstrated a well-circumscribed fatty attenuating mass (black arrow) containing some higher attenuation tissue (Fig. 5a and b). No intracranial extension was identified. In the operating room it became apparent that the short stalk of the mass was attached at the lateral nasopharynx (Fig. 6). Complete gross surgical excision was achieved with monopolar cautery under general anesthesia.

Fig. 3. Case 1: Gross excised surgical specimen.

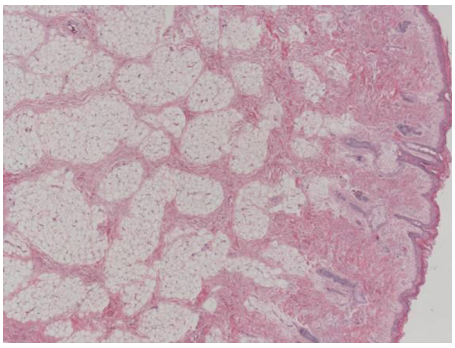

Fig. 4. Case 1: Histopathology low magnification.

Histopathology confirmed a 3 cm × 1 cm skin-covered fleshy polyp lined with stratified squamous epithelium (Fig. 7). The deeper stroma contained hair follicles, sebaceous glands and

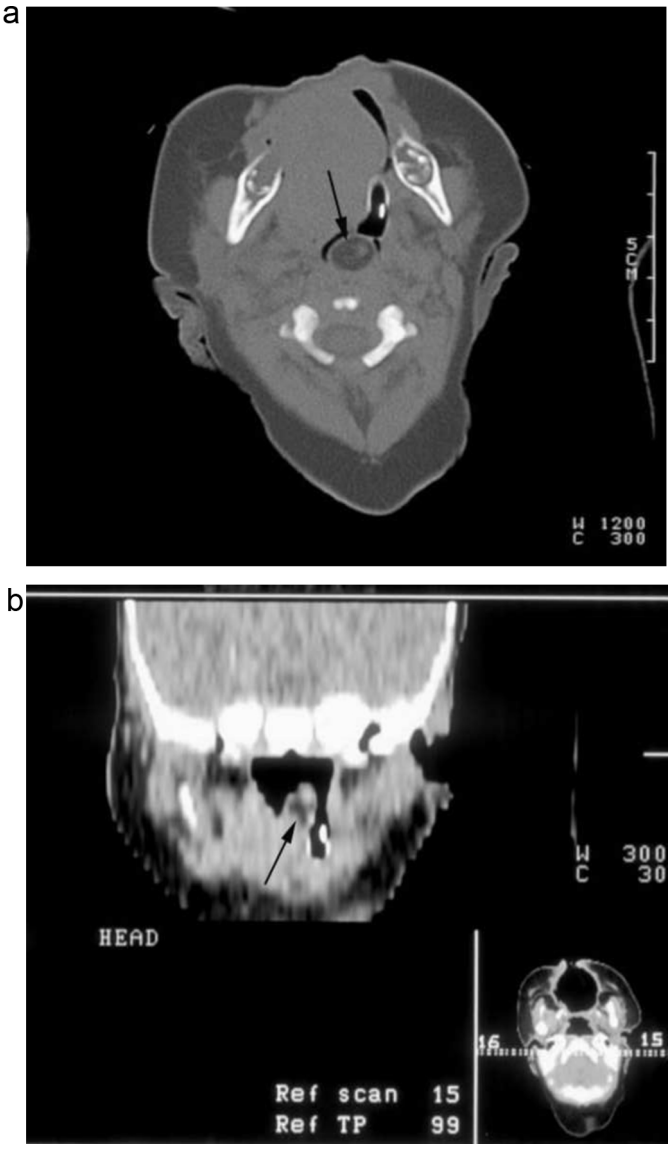

Fig. 5. Case 2: Axial non-enhanced CT (a) axial and (b) coronal imaging showing the midline choristoma (black arrow) occluding the airway.