CASE REPORT

Fibrolipoma of the eustachian ostium

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SUMMARY

Nasopharyngeal fibrolipoma is extremely rare, with only four case reports in the literature. However, lipoma of the eustachian tube is the rarest with a single case report in the literature. A 50-year-old woman presented with obstruction of both nostrils for the past 1 year. CT scan showed a mass in the postnasal space extending from the right side of the nasopharynx to the oropharynx. The nasal endoscopy found a polypoidal mass arising from the posterior-inferior margin of the right eustachian tube ostium and extending to the oropharynx. Histopathological examination of the excised polyp found features suggestive of fibrolipoma. Fibrolipoma is characterised by prominent bundles of mature collagenous or myxocollagenous stroma intermixed with mature adipocytes. CT is useful in the diagnosis of lipoma but MRI is preferable. This is the second case of eustachian tube fibrolipoma to be reported in the literature that emphasises the role of nasal endoscopy and rarity of this tumour.

BACKGROUND

Benign tumours of the nasopharynx are generally rare, with the exception of nasopharyngeal adenoiditis. Lipoma is the most common soft-tissue tumour in the body but is rarely present in the nasopharynx. There are several histological variants of lipoma, and fibrolipoma is an unusual variant. Nasopharyngeal fibrolipoma is extremely rare, with only four case reports in the literature.^{1–4} However, lipoma of the eustachian tube is the rarest with single case report in the literature.⁴ In this case report, we present the second case of eustachian tube fibrolipoma that arose from the inferior part of the ostium and extended into the nasopharynx and was excised endoscopically with a cheap custom-made cautery.

CASE PRESENTATION

On 19 April 2012, a 50-year-old woman presented with an insidious and progressive obstruction of both the nostrils for the past 1 year. Initially, obstruction started in the right nostril but within 6 months, a polypoidal mass appeared posterior to the palate obstructing both the nostrils. There was no other contributory history.

Upon examination, we found a large yellowish, smooth-surfaced, globular soft to firm mass in the oropharynx that appeared to be arising from the nasopharynx. Anterior rhinoscopy was normal.

INVESTIGATIONS

Otoscopy revealed intact tympanic membranes but pure tone audiometry had 38 dB conductive hearing loss in the right ear, and normal hearing

threshold (20 dB) in the left ear. Tympanometry found 'B'-type curve in the right ear and 'A'-type curve in the left ear. We kept a possibility of choanal polyp causing middle ear effusion in the right ear, and the patient was subjected to investigation to clinch the diagnosis.

A CT scan (figures 1 and 2) showed a mass in the postnasal space extending from the right side of the nasopharynx up to the oropharynx. The mass had a hypodense (<100 HU) centre with an isodense peripheral area.

DIFFERENTIAL DIAGNOSIS

These features were suggestive of dermoid cyst preferably a Thornwaldt's cyst. However, lipoma and minor salivary gland tumour can also present similarly.

TREATMENT

The nasal endoscopy found a polypoidal mass arising from the posterior-inferior margin of the right eustachian tube ostium extending to the oropharynx. The mass was excised using electrocautery (Video 1) with modified metallic suction tube preserving the eustachian isthmus. The histopathological examination of the excised polyp (figure 3) showed features suggestive of fibrolipoma.

OUTCOME AND FOLLOW-UP

The patient recovered well and had no recurrence in 6 months follow-up.

DISCUSSION

Nasopharyngeal tumours present as unilateral nasal obstruction, aural fullness, hearing loss and

Figure 1 CT scan (axial section) showing mass in the nasopharynx.

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Figure 2 CT scan (coronal section) showing mass with a hypodense centre arising from the lateral wall of the nasopharynx.

epistaxis. Diagnosis is usually achieved by anterior rhinoscopy and radiological investigations; however, histopathological examination confirms it. Endoscopic surgery has simplified the excision of benign and limited malignant tumours of nose and paranasal sinus. Nowadays all such tumours of the nasopharynx are excised with the help of endoscope that assures exact extent and complete excision of these tumours without damaging important structures. In the present case, endoscope helped in avoiding trauma to the eustachian tube ostium and avoiding its sequel.

Adenoid is the commonest soft-tissue tumour in the nasopharynx. Antrochoanal polyp, inverted papilloma and pleomorphic adenoma are the few other benign tumours of the nasopharynx but lipoma is a rare tumour of the nose and paranasal sinus.⁵

Lipoma presents as solitary or multiple tumours and occurs anywhere in the body in subcutaneous, muscular or intermuscular planes. There are several histological variants of lipomas according to the tissue present, including spindle cell lipoma, fibrolipoma, myxolipoma, myolipoma, angiolipoma, osteolipoma, pleomorphic lipoma and chondroid lipoma.⁶ Fibrolipoma is characterised by prominent bundles of mature collagenous or myxocollagenous stroma intermixed with mature adipocytes.⁷

CT is useful in the diagnosis of lipoma but MRI is preferable. Lipomas produce strong signals on the T1-weighted and the T2-weighted MR images and a weak signal on fat-suppressed

Video 1 Surgical video of the endoscopic excision of the polyp.

Figure 3 Excised specimen of the polyp.

images.⁸ CT provides images of a homogeneous mass (−65 to −120 HU) with few septations without contrast enhancement.⁹ We did not perform a MRI in this case as CT scan is a prerequisite for any endoscopic sinus surgery due to its ability to delineate bony anatomy better. Moreover, MRI is helpful in sinonasal disease with an evidence of breach of normal bony anatomy on CT, so that disease extension can be assessed in relation to adjoining important soft-tissue structures, for example, meninges, eye, optic nerve or cavernous sinus.

Liu *et al*⁴ reported the first case of fibrolipoma of the eustachian tube in a 34-year-old woman. They excised the tumour endoscopically and the patient did not report any recurrence in 5 months follow-up.

Fibrolipoma mainly affects distal extremities⁶ and this is the second case of eustachian tube fibrolipoma to be reported in the literature that emphasises the role of nasal endoscopy and rarity of this tumour.

Learning points

- ▶ Nasopharyngeal fibrolipoma is extremely rare with only four case reports in the literature.
- ▶ Lipoma of the eustachian tube is the rarest with a single case report in the literature.
- ▶ This is the second case report of eustachian ostium.
- ▶ Tumour was excised with custom-made electrocautery under endoscopic guidance.

Competing interests None.

Patient consent Obtained.

Provenance and peer review Not commissioned; externally peer reviewed.

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