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An unusual finding of schwannoma in the columellar area—A case report

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ABSTRACT

INTRODUCTION: Schwannomas are benign tumours of the nerve sheath that originate from Schwann cells. Less than 4% of these tumours arise in the sinonasal tract. Columellar involvement is extremely rare – three other cases involving the columella have been reported since 1967.
PRESENTATION OF CASE: A 25-year-old woman presented with a swelling of the nasal columella from eight months into pregnancy. She presented with right nasal obstruction and discomfort over the nasal bridge. Pre-operative MRI and ultrasound were performed. The mass was surgically excised using an external septorhinoplasty approach giving a good cosmetic outcome. Histopathologic examination demonstrated schwannoma.
DISCUSSION OF CASE: Nasal schwannoma may present with variable symptoms. We discuss the MRI and histological features of schwannoma. A literature review suggests that schwannomas may have accelerated growth in pregnancy. The open rhinoplasty approach is the favoured method for excision of schwannomas near the columellar region.
CONCLUSION: Nasal schwannomas are rare in the sinonasal tract, however they need to be considered part of the differential diagnosis for nasal masses. The treatment of choice for these lesions is surgical excision.
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1. Introduction

Schwannomas, also called neurilemmomas, are benign tumours of the nerve sheath. They are relatively common tumours with approximately 25–45% arising from the head and neck region [1]. Sinonasal involvement is uncommon with only 4% of these tumours involving the nasal and paranasal cavity [2]. Columellar involvement is extremely rare. A literature search found only three other published cases of schwannoma involving the columella [3,4]. We therefore present the 4th documented case of a columellar schwannoma. This case report has been reported in line with the SCARE criteria [5].

2. Case presentation

A 25-year-old Middle Eastern woman presented to our ENT department in a tertiary teaching hospital with a two-month history of a swelling of the nasal columella. She first noticed this eight months into pregnancy, and she attended our clinic about one month after uneventful delivery of twins. The lesion gradually increased in size during her pregnancy, and was associated with

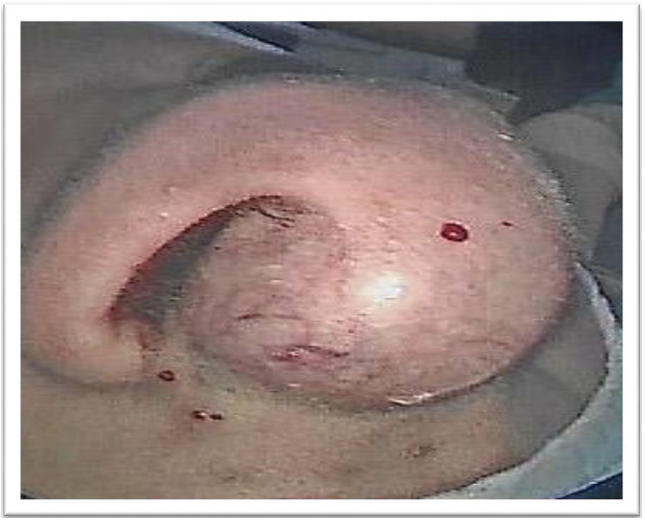

Fig. 1. Columellar mass immediately before operation.

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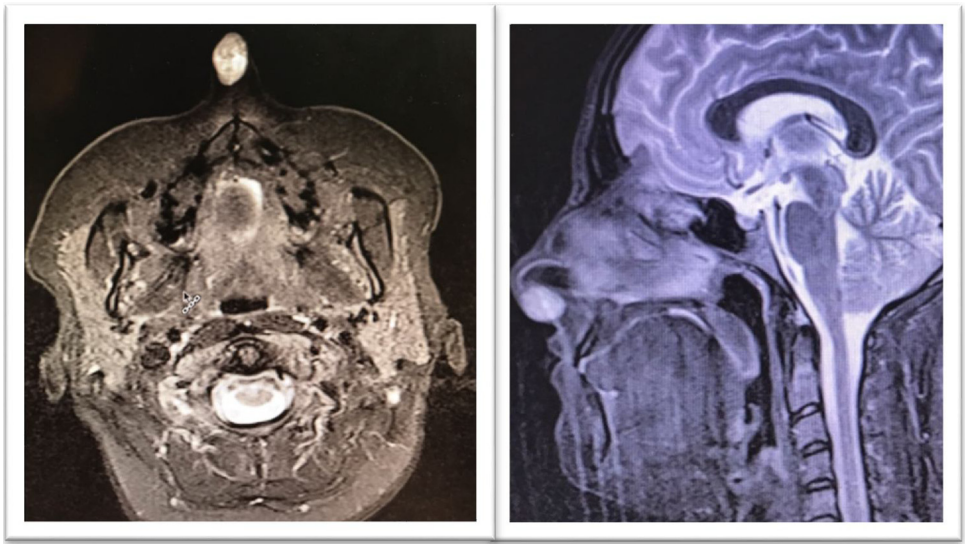

Fig. 2. Appearance of columellar lesion on MRI T2 sequencing (axial and sagittal views).

right nasal obstruction and discomfort over the nasal bridge. Her sense of smell and taste remained intact. There was no history of epistaxis, rhinorrhea or pain. She was otherwise fit and well.

On examination there was a soft, smooth, non-tender expansile lesion over the columella, with mild telangiectasia of the overlying skin (Fig. 1.). It was felt to be separate from the anterior nasal septum. Flexible nasoendoscopy revealed no abnormality within the nasal cavity. A non-contrast MRI revealed a $1.9 \times 1.4 \times 1.1$ cm homogeneous mass in the right nasal columella, of high T2 and intermediate T1 signal, abutting the nasal septum with no deeper extension (Fig. 2).

The differential diagnosis at the time she was seen included a nasal dermoid cyst. The decision to surgically excise this was made based on the recent enlargement and cosmetic impact. Preoperatively, there was concern regarding vascularity of this lesion therefore an ultrasound scan was performed. It revealed a solid lesion with significant vascularity and multiple feeding vessels.

She underwent her operation after a 13-month clinical investigation. The size of the lesion had remained stable since the end of her pregnancy. An open rhinoplasty approach was used to excise the mass, with use of a columellar chevron incision followed by raising superior and inferior skin flaps and dissection of the lower lateral cartilages. The mass was found to be well-encapsulated. It was bluntly dissected from the skin and cartilage. The upper lateral cartilages were not encountered and the lesion was completely excised with the capsule intact (Fig. 3). The medial crura of the lower lateral cartilages were apposed with an absorbable suture before skin closure. Nasal splints were not used.

Post-operative histological examination of the specimen revealed an encapsulated spindle cell neoplasm measuring $23 \times 18 \times 12$ mm (larger than initially suggested on MRI). There were foci of peripheral palisading of the lesional cells, with formation of Verocay bodies. Admixed with the spindle cells were frequent small to medium diameter blood vessels with hyalinised walls. There was little cytological atypia, no atypical forms and no necrosis found. Immunohistochemistry was performed, showing strong and diffuse nuclear and cytoplasmic staining for S100 and strong nuclear staining for red Sox-10. Although only very occasional mitotic figures were found, the Ki67 (MIB-1) stain showed a higher proliferation fraction than is typically found in schwannoma (5–8% as opposed to >1% in most examples). CD34, CD31 and ERG highlighted the prominent vascular background. Staining for oestrogen receptor (ER) and progesterone receptor (PGR) were both negative (at the threshold used to evaluate ER and PGR

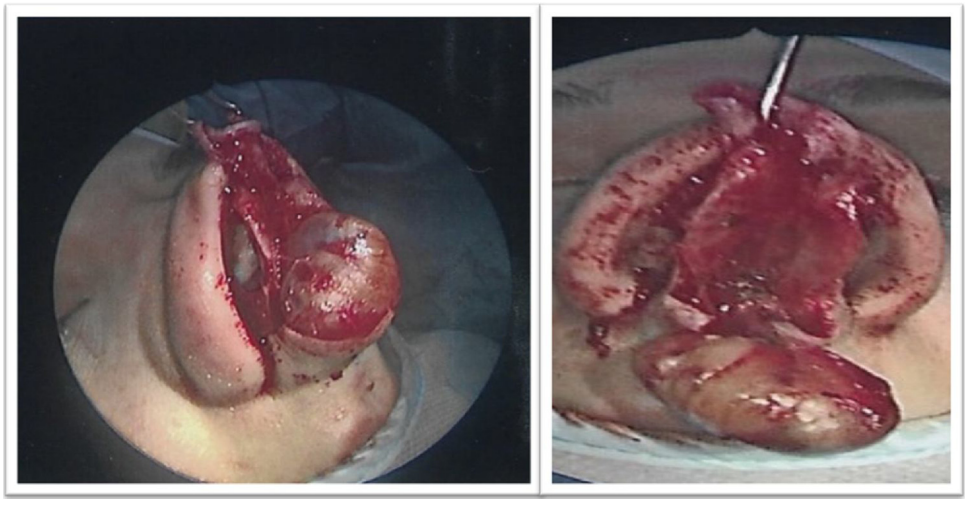

Fig. 3. Intra-operative view: dissection of lesion with intact capsule.

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