CASE REPORT

Sialolipoma of the parotid gland: a rare entity

Diwakar Pandey, Manu Vats, Azaz Akhtar, Om Prakash Pathania

Department of General Surgery, Lady Hardinge Medical College and Associated SSK Hospital, New Delhi, India

Correspondence to

Dr Diwakar Pandey,
drdiwakarpandey86@gmail.com

Accepted 22 May 2015

SUMMARY

Lipomatous neoplasms of the parotid gland are rare tumours contributing from 0.6% to 4.4% to all parotid neoplasms with most series reporting an incidence of 1%. It is extremely rare in females, being 10 times more common in males, and the most common age of presentation is the five to sixth decade. Numerous histological variants of salivary gland lipoma have been described. Sialolipoma is a rare variant having proliferation of mature adipocytes with secondary entrapment of the normal salivary gland element. We report a rare case of sialolipoma in the right parotid of a 45-year-old woman who was treated with superficial parotidectomy. Postoperative recovery as well as follow-up has been uneventful.

BACKGROUND

A review of the literature indicates that around 35 cases of sialolipoma of the salivary gland have been reported worldwide, of which the majority of cases (n=18) arise from the parotid gland (51.4%) symptomatically behaving like pleomorphic adenoma with very less incidence of facial nerve entrapment (14%).¹ The authors report a case of sialolipoma of the right parotid in a 45-year-old woman treated with superficial parotidectomy. Follow-up has been uneventful for the past 6 months.

CASE PRESENTATION

A 45-year-old woman presented with a 15-year history of swelling in the right parotid region without a history of infection, trauma, facial weakness, xerostomia, dysphagia and weight loss. The swelling was insidious at onset and very slowly progressed to its current size. The patient also had a history of pain over the swelling for the past 6 months which was insidious at onset, with a mild, continuous dull ache and getting aggravated on taking meals. The medical, surgical, dental and family history was unremarkable. On examination, a well-defined mobile, oval swelling of size 6×6 cm was present in the right parotid region, being minimally tender on deep palpation. It had a smooth surface, with firm to cystic consistency and regular margins. The right ear and intraoral examination was normal. The neck lymph nodes were not palpable.

INVESTIGATIONS

Ultrasonography of the head and neck region revealed a diffusely heterogeneous soft tissue mass of size 7×8 cm in the right parotid gland with intralesional vascularity. Fine needle aspiration cytology (FNAC) was attempted two times and yielded only a scant amount of blood. Contrast-

Figure 1 Contrast-enhanced CT of the head and neck coronal section-1 showing a right parotid swelling (arrow head).

enhanced CT of the head was done with angiography to rule out haemangioma. It revealed right parotid lipomatosis of size 6×7 cm having heterogeneous density (−50 HU to −110 HU) with no vascular enhancement (figures 1–3).

DIFFERENTIAL DIAGNOSIS

In the light of the long history, findings suggestive of a well circumscribed firm to cystic right parotid swelling and intralesional vascularity following differential diagnosis were considered:

Figure 2 Contrast-enhanced CT of the head and neck coronal section-2 showing a right parotid swelling (arrow head).

CrossMark

To cite: Pandey D, Vats M, Akhtar A, et al. *BMJ Case Rep* Published online: [please include Day Month Year] doi:10.1136/bcr-2014-209264

Figure 3 Contrast-enhanced CT of the head and neck (axial section) showing a right parotid swelling (arrow head).

- ▶ Warthin tumour
- ▶ Benign mixed tumour of the parotid
- ▶ Lipoma of the parotid
- ▶ Haemangioma of the parotid

TREATMENT

After preoperative evaluation, the patient was taken for surgery under general anaesthesia. Surgical intervention included standard right superficial parotidectomy (figures 4–6) with preservation of all divisions of the facial nerve. A closed suction drain was put in situ followed by closure in layers.

OUTCOME AND FOLLOW-UP

There was no evidence of facial weakness in the immediate postoperative period. Drain removal was done on postoperative day 3.

Histopathological examination of the resected specimen was suggestive of sialolipoma of the right parotid gland with predominantly >70% adipose tissues with entrapped salivary oncocytic cells in acini and clusters (figure 7).

Figure 4 Intraoperative photograph—branches of the facial nerve seen after superficial parotidectomy.

Figure 5 Intraoperative photograph—the specimen of the right parotid lipoma after superficial parotidectomy.

After the 6-month follow-up, the prognosis was excellent with a well-healed surgical scar. There was no evidence of Frey's syndrome, facial weakness or recurrence.

DISCUSSION

Adipose tissue is normally present in the parotid gland, but the incidence of lipoma is very low, with a contribution between 0.6 to 4.4% to all parotid neoplasms. However, most series report an incidence of 1% with a predominant male predilection.^{3 4}

Despite its rarity, various histopathological variants (lipoma, interstitial lipomatosis, lipoadenoma, oncocytic lipoadenoma, lipomatous atrophy, sialolipoma) of salivary gland lipoma have been described. Sialolipoma is a rare variant characterised by the proliferation of mature adipocytes with secondary entrapment of the normal salivary gland element.⁵ The common clinical presentation is that of a painless, slow-growing mass commonly found in the major salivary gland with very less complications involving the deep lobe of the parotid and facial nerve.

On an extensive search of the literature, we could only find around 35 reported cases of sialolipoma of the salivary glands, of which the majority (n=18, 51.4%) were in the parotid. A hypothesis put forward by Akkrish *et al*⁶ suggests the pathology responsible for sialolipoma being some form of salivary gland dysfunction leading to altered salivary gland architecture.

Figure 6 Cut-specimen of the superficial parotid excision showing predominantly fatty consistency.

Figure 7 Histopathological slide demonstrating salivary gland elements trapped in mature adipose tissue with a thin fibrous septa separating normal salivary gland tissue from adipose tissue (H&E, ×40).

USG has traditionally been the initial imaging modality in case of suspected head and neck lipomas,^{7 8} but current evidence suggests using CT or MRI. On CT, lipomas of the parotid are homogeneous masses (−50 to −150 HU) with few septations without contrast enhancement.^{2 8} MRI can accurately diagnose lipoma by comparing the signal intensity on T1-weighted and T2-weighted films.² The clearly defined margin of the lipoma appears as a black rim, thus distinguishing the lipoma from surrounding adipose tissue.⁹ In the literature, however, correct categorisation of benign versus malignant parotid gland tumour has been reported to be 87% for the CT and MRI.¹⁰ So currently, CT remains the accurate and cost-effective preoperative diagnostic method of choice.

FNAC has great value in the diagnosis of parotid tumours,¹¹ but its accuracy drops to less than 50% in cases of parotid gland lipoma.¹²

The treatment of choice remains similar to that for benign superficial parotid tumours with formal superficial parotidectomy. Involvement of the deep lobe requires a complex surgical procedure with removal of the deep lobe and preservation of facial nerve branches. The patient should be counselled and educated about possible anticipated postoperative complications.

Histopathology of the resected tumour is the definitive investigation to identify the variety of lipoma with sialolipoma showing mature adipose tissue entrapping benign acinar and ductal cells and ductal epithelial changes like oncocytic metaplasia, fibrosis and lymphocytic infiltrate.

The recurrence rate for sialolipoma has not been individually described, but in general it remains less than 5% for parotid lipomas,¹³ requiring redo surgery with more risks of postoperative complications like facial nerve injury and Frey's syndrome.

Learning points

- ▶ Salivary gland neoplasms have a vast differential diagnosis.
- ▶ Variable firm to cystic consistency of the parotid swelling on clinical examination can be lipoma, although the Warthin tumour remains the first diagnosis.
- ▶ The possibility of lipomatous lesion of the parotid including a rare histopathological variant like sialolipoma should be suspected when the CT scan shows well-circumscribed fat-like tissue within the parotid gland.
- ▶ Despite various histological variants, superficial parotidectomy remains the treatment of choice for all superficial lobe benign tumours.

Competing interests None declared.

Patient consent Obtained.

Provenance and peer review Not commissioned; externally peer reviewed.

REFERENCES

- 1 Qayyum S, Meacham R, Sebelik M, *et al.* Sialolipoma of the parotid gland: case report with literature review comparing major and minor salivary sialolipomas. *J oral Maxillofac Pathol* 2013;17:95–7.
- 2 Korentager R, Noyec AM, Chapnik JS, *et al.* Lipoma and liposarcoma of the parotid gland: high resolution preoperative imaging diagnosis. *Laryngoscope* 1988;98:967–71.
- 3 Walts AE, Perzik SL. Lipomatous lesions of the parotid area. *Arch otolaryngol* 1976;102:230–2.
- 4 El Monem MH, Gaafar AH, Magdy EA. Lipomas of the head and neck: presentation, variability and diagnostic workup. *J Laryngol Otol* 2006;120:47–55.
- 5 Nagao T, Sugano I, Ishida Y, *et al.* Sialolipoma: a report of seven cases of a new variant of salivary gland lipoma. *Histopathology* 2001;38:30–6.
- 6 Akkrish S, Leiser Y, Shamira D, *et al.* Sialolipoma of the salivary gland : two new cases, literature review, and histological hypothesis. *Oral Maxillofac Surg* 2011;69:1380–4.
- 7 Ahuja AT, King AD, Kew J, *et al.* Head and neck lipomas: sonographic appearance. *AJNR Am J Neuroradiol* 1998;19:505–8.
- 8 Gritzmman N, Schratter M, Traxler M, *et al.* Sonography and computed tomography in deep cervical lipomas and lipomatosis of the neck. *J Ultrasound Med* 1988;7:451–6.
- 9 Kimura Y, Ishikawa N, Goutsu K, *et al.* Lipoma in the deep lobe of the parotid gland: a case report. *Auris Nasus Larynx* 2002;29:391–3.
- 10 McGuirt WF, Keyes JW Jr, Greven KM, *et al.* Preoperative identification of benign vs. malignant parotid masses: a comparative study including positron emission tomography. *Laryngoscope* 1995;105:579–84.
- 11 Stewart CJ, MacKenzie K, Mc Garry GW, *et al.* Fine-needle aspiration cytology of salivary gland : a review of 341 cases. *Diagn Cytopathology* 2000;22:139–46.
- 12 Layfield LJ, Glasgow BJ, Goldstein N, *et al.* Lipomatous lesions of the parotid gland. Potential pitfalls in fine needle aspiration biopsy diagnosis. *Acta Cytol* 1991;35:553–6.
- 13 Enzinger FM, Weiss SW. *Soft tissue tumors*. 3rd edn. St.Louis: Mosby, 1995:381–430.

Copyright 2015 BMJ Publishing Group. All rights reserved. For permission to reuse any of this content visit <http://group.bmj.com/group/rights-licensing/permissions>.
BMJ Case Report Fellows may re-use this article for personal use and teaching without any further permission.

Become a Fellow of BMJ Case Reports today and you can:

- ▶ Submit as many cases as you like
- ▶ Enjoy fast sympathetic peer review and rapid publication of accepted articles
- ▶ Access all the published articles
- ▶ Re-use any of the published material for personal use and teaching without further permission

For information on Institutional Fellowships contact consortiasales@bmjgroup.com

Visit casereports.bmj.com for more articles like this and to become a Fellow