

Occult Neoplasm (Mucoepidermoid Carcinoma) in a Parotid Cyst

Anuja Santosh Kulkarni, Prabodh Karnik

ABSTRACT

A parotid cyst is a well-documented clinical entity. Here we report a case of low-grade mucoepidermoid carcinoma as an occult neoplasm; a rare presentation of a parotid cyst in a 35-year-old female patient who presented with well-defined small cystic swelling of right parotid gland; cytologically consistent with a simple parotid gland cyst. The purpose of this article is to create awareness about existence of an occult neoplasm (low-grade mucoepidermoid carcinoma in this case) in a small simple parotid cyst in a young female an unusual presentation and management of parotid cyst.

Keywords: Parotid cyst, Low-grade mucoepidermoid carcinoma, Occult neoplasm.

How to cite this article: Kulkarni AS, Karnik P. Occult Neoplasm (mucoepidermoid carcinoma) in a Parotid Cyst. *Int J Head and Neck Surg* 2012;3(1):53-55.

Source of support: Nil

Conflict of interest: None declared

CASE REPORT

A 35-year-old female patient came with the chief complaint of swelling over the right parotid region since 3 months, painless, progressively increasing in size; initially from size of pea to that of walnut. There was no history of increase in size of swelling or pain while eating. There was no history suggestive of any inflammatory or granulomatous sialoadenitis. There was no major medical surgical illness in the past.

On examination, there was a single well-defined, globular swelling of size 2 × 2 cm situated just anterior to the right tragus; in the region of right parotid gland. Surface of the swelling was not bosselated, without any signs of inflammation. On palpation, the swelling was nontender, soft to firm in consistency, cystic, freely mobile, neither adhered to the underlying tissue nor to the overlying skin. Temperature of the skin overlying swelling was not raised. Facial nerve examination was normal. Intraoral examination did not reveal any abnormality.

Patient was investigated subsequently. Seropositivity for HIV was ruled out. Ultrasonography revealed 1.9 × 1.6 cm sized hyperechoic, inhomogeneous, cystic lesion involving superficial lobe of the right parotid with few intraparotid lymph nodes, suggestive of a parotid cyst. Computer tomography (CT scan) of neck revealed a solitary well-defined lesion measuring 1.9 × 1.7 × 1.9 cm in size in the region of superficial lobe of parotid gland in the close

proximity to the right masseter muscle; nonenhancing center with smooth peripherally enhancing walls (Figs 1 and 2). Cytological study showed cholesterol crystals and foamy macrophages. Few epithelial cells were seen in groups and sheets. This was consistent with a simple salivary gland cyst (Figs 3 and 4).

Patient was worked up for superficial parotidectomy. Complete surgical excision of superficial lobe of parotid along with the cyst contained in it was carried out. The facial nerve was identified and preserved. The specimen was subjected to histopathological study (Fig. 5). It revealed a unilocular parotid cyst and the presence of low-grade

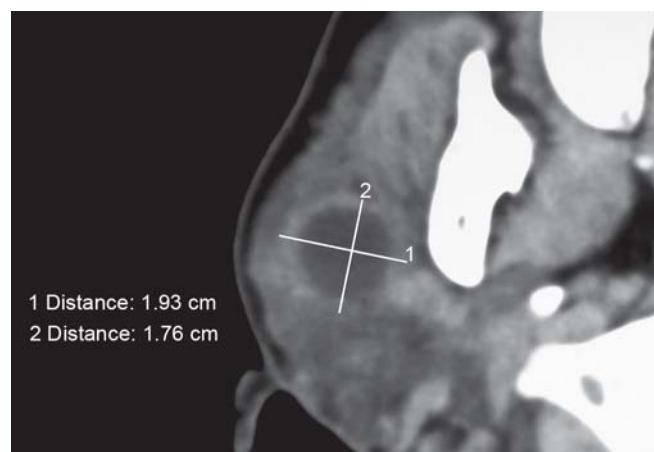


Fig. 1: CT scan of head and neck showing right parotid cyst, nonenhancing center with smooth peripheral enhancement of walls on nonionic contrast, slice thickness 5 mm

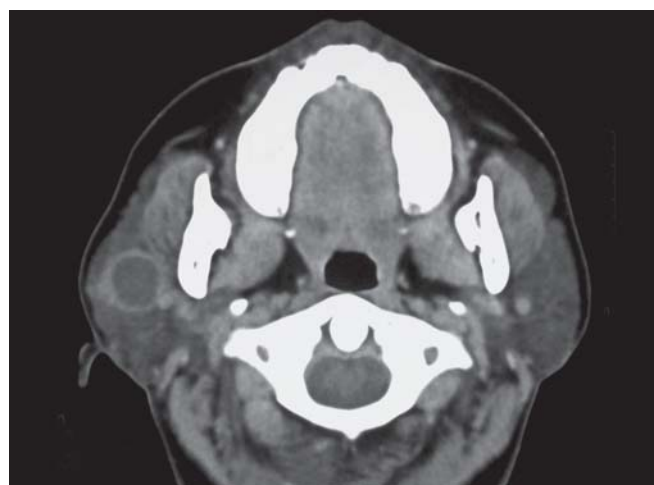


Fig. 2: CT scan of head and neck showing right parotid cyst in superficial lobe of right parotid gland, nonenhancing center with smooth peripheral enhancement of walls on nonionic contrast, slice thickness 5 mm

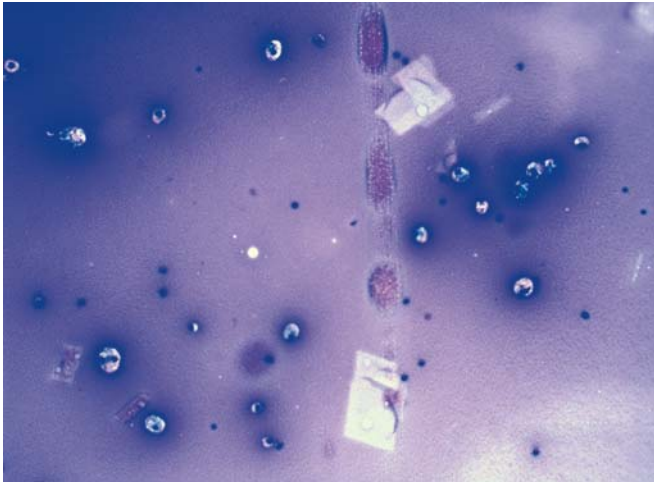


Fig. 3: FNAC smear from right parotid gland showing cholesterol crystals and foamy macrophages few epithelial cells suggestive of a simple parotid cyst (Gimsa staining, 10x)

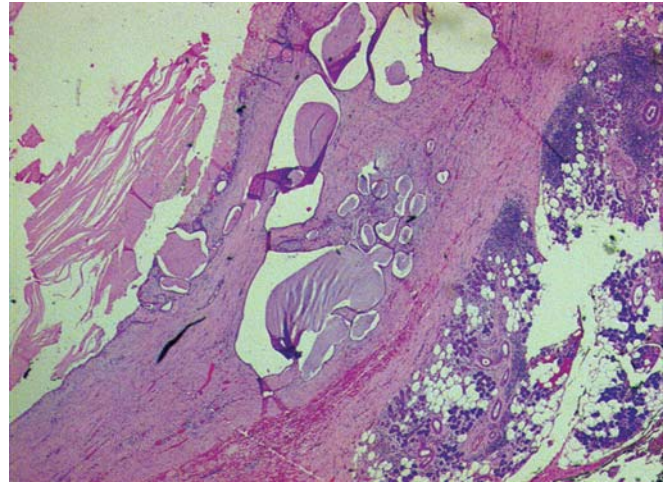


Fig. 6: Photomicrograph of a parotid cyst (H&E staining, magnification 10x)

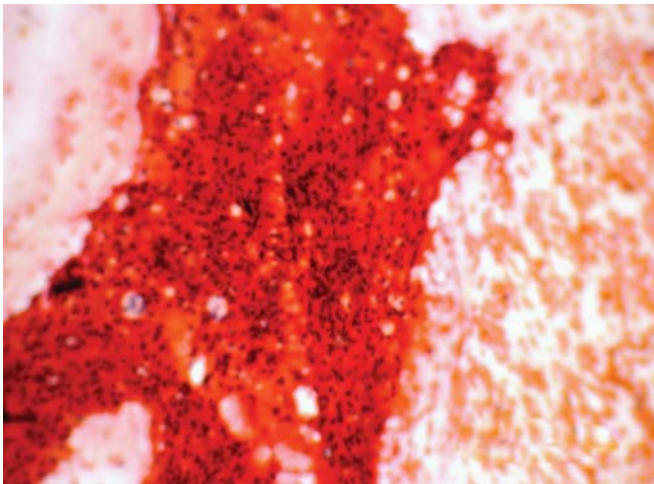


Fig. 4: FNAC smear from right parotid gland showing cholesterol crystals and foamy macrophages few epithelial cells in groups and clusters suggestive of a simple parotid cyst (Papanicolaou stain, magnification 40x)

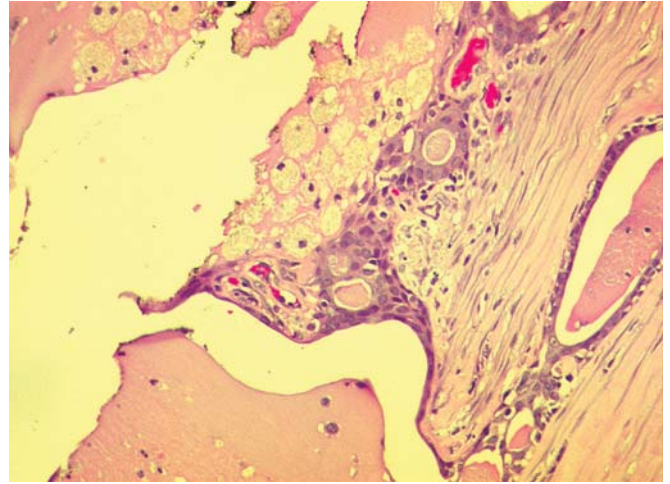


Fig. 7: Photomicrograph of parotid showing low-grade mucoepidermoid carcinoma (H&E staining, magnification 40x)



Fig. 5: Superficial parotidectomy specimen (gross)

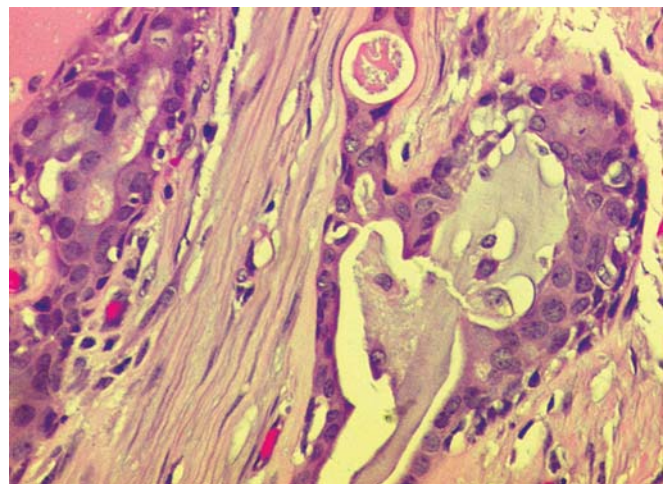


Fig. 8: Photomicrograph of parotid showing low-grade mucoepidermoid carcinoma [(H&E) staining, magnification 100x]

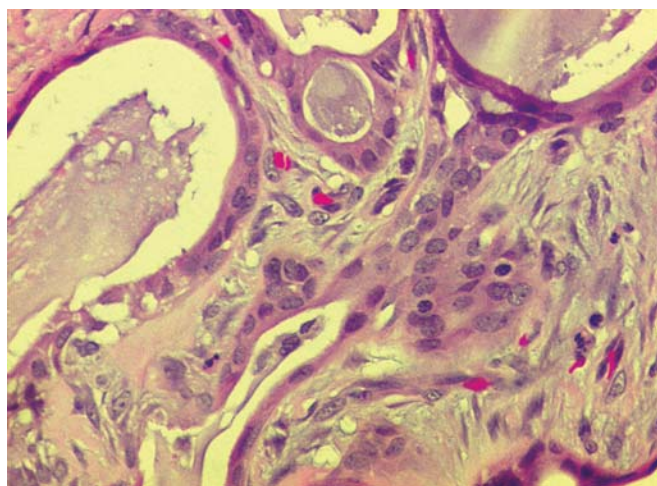


Fig. 9: Photomicrograph of parotid showing low-grade mucoepidermoid carcinoma [(H&E) staining, magnification 100x]

mucoepidermoid carcinoma measuring 1 cm diameter (Figs 6 to 9).

DISCUSSION

Simple (retention) cysts within the parotid tissue are rare¹⁻⁴ and one should suspect *Echinococcus* or a hydatid cyst or human immunodeficiency virus (HIV)-related cysts. The most common cystic lesion is a Warthin's tumor and areas of pleomorphic adenoma may also be cystic.¹ Branchial cysts can occur within the lymph nodes in the gland on the surface of gland. Lipomas can feel cystic. They usually lie lateral to the parotid gland but can extend anteriorly into the anterior compartment of face.¹ They must be differentiated from fatty infiltration, which is usually bilateral. Benign lymphoepithelial lesion was described in 1952 by Godwin.¹ It is a pathological process that arises in the intralobular ducts like a punctuate parotitis. As the ducts dilate, their cells disrupt and epidermoid metaplasia begins. Lymphocytes aggregated around the ducts and the lumen becomes obliterated. It is probably part of a lymphoreticular proliferative disease.¹ It is not yet clear whether a benign lymphoepithelial lesion evolves into malignancy or whether it is a part of an immunological disorder that is going to become lymphoproliferative disease anyway.^{1,4}

In the present case report, mucoepidermoid carcinoma caused significant obstruction of parotid duct thereby given rise to a simple retention cyst of parotid. Existence of such pathology associated with a parotid cyst is a very rarely described entity in a literature; this is probably a second case in literature.² Following superficial parotidectomy the patient had uneventful recovery and there was no recurrence on 2 years follow-up.

CONCLUSION

Parotid cyst can be a presenting symptom in patients with occult carcinoma parotid.²⁻⁴ Hence, treatment of a simple parotid cyst should be facial nerve preserving superficial parotidectomy with meticulous, histology and careful follow-up.

ACKNOWLEDGMENT

We would like to thank Dr. A K Vyas Medical Director, Jagjivan Ram Hospital for allowing us to publish this case report. Special thanks to Dr Uma Nataraj Sr. DMO ENT, Jagjivan Ram Hospital for her support.

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