

Parotid Duct Mucocele

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Summary

Parotid swelling is a common presentation in ENT clinic. Most of the cases involve pathology of the gland. There are not many reported cases about parotid duct pathology. We describe a case of a large parotid duct mucocele with a calculus. Excision of the mucocele and superficial parotidectomy was performed. The post-operative recovery was uneventful.

Key Words: Parotid swelling, Parotid duct mucocele

Case Report

A 31-year-old Malay soldier, presented to us with a swelling at the left parotid region for about 20 years. It increases in size slowly, but for the past 1 year, its size increased rapidly. He also complained of dull ache at the same area on and off for the past 2 days which was not related to meals. He had no ear symptom, no facial weakness, or dental complaints. He complained of pulling sensation on opening his mouth wide. There was no history of trauma or previous surgery.

On examination, there was a cystic swelling over his left parotid region measuring 6 by 5cm, which was mobile, non-tender and not fixed to the skin (Figure 1). The swelling was not pulsatile nor reducible. No bruit was heard on auscultation. Oral cavity examination was normal. Clear fluid was noted oozing from the parotid punctum when pressure was applied externally. The tonsils looked normal and not pushed medially. Examination of the ear and 7th cranial nerve did not reveal any abnormality. Clinical diagnosis of left parotid cyst was made.

Surgery was carried out under general anaesthesia. Intra-operatively, the cystic swelling was noted to be

part of the parotid duct with parotid tissue stretched over it. The facial nerve was identified and its buccal and mandibular branch were adherent to the cyst wall (Figure 2: white arrow –buccal branch; horizontal black arrow –zygomatic branch; oblique black arrow – facial nerve trunk). The cyst was filled with mucoid secretion and a calculus measuring 3 mm in diameter. Superficial parotidectomy was performed and the mucocele was dissected from the nerve and the proximal duct was ligated. Facial nerve was left intact. A final diagnosis of left parotid duct mucocele was made.

Post-operative, he was noted to have mild facial nerve impairment (House and Brackmann grade II). He was discharged on the 4th post-operative day. Histopathology examination showed benign parotid duct mucocele. On follow up he recovered uneventfully. His left facial nerve was near normal.

Discussion

Parotid duct mucocele is not common. The European and American literatures reported that salivary duct cyst constitute about 10% of all cyst of the salivary gland. It

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Fig. 1: Preoperative picture of the patient. Swelling over left parotid region.

was reported by Takeda et. al. from Iwate Medical University Hospital that only 0.5% (3 out of 586) of salivary gland cysts were diagnosed to be salivary duct cysts. Two of the cases appeared as a unilocular lesion lined by double- and multi-layered epithelium histologically. The other one showed marked intraluminal and intramural adenomatous proliferation of the epithelial lining, suggesting a benign tumour histologically.

There is a hypothesis that distinct types of salivary gland cysts may be the starting point of a salivary gland tumour. Seifert noted that epithelial alterations were found especially in salivary duct cysts of parotid gland and in mucous retention cysts of minor salivary glands. The characteristic cellular changes were epithelial metaplasias and focal epithelial proliferations with plump or papillary plaques projecting into the cyst lumen. These changes are comparable to similar alterations in odontogenic cysts as possible early manifestation of a tumour. One out of 1661 salivary gland cysts in his paper had mucoepidermoid carcinoma developed in the wall of a parotid duct cyst. The differential diagnosis include cystadenoma and well-differentiated cystic mucoepidermoid carcinoma.



Fig. 2: Intraoperative picture showing intact facial nerve trunk with its branches. White arrow - buccal branch Horizontal black arrow - zygomatic branch Oblique black arrow - facial nerve trunk

The cause of salivary duct mucocele are obstruction or stenosis of the duct. In this case, the obstruction is most probably due to the ball-valve effect of the calculus in the mucocele, which is partial and intermittent, and is severe enough to cause dilatation of the duct. Another possibility is the obstruction might have cause some inflammation many years ago, which was forgotten by the patient, which later healed with fibrosis at certain part of the gland or duct, causing stenosis of the duct, and thus leading to mucocele formation.

Apart from calculus and stenosis of duct, there was a case reported by Alho OP et. al. from Finland that intraductal papilloma was found with the parotid duct cyst. They thought that the benign tumour is the most probable cause of obstruction of the duct, leading to the formation of ductal cyst.

Salivary duct cysts can also occur after parotid duct surgery. This most probably due to stenosis of the duct after surgery. Tunkel and Furin from John Hopkins Medical Institutions, reported formation of salivary cysts following parotid duct translocation for sialorrhoea.

CASE REPORT

Reference

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