CASE REPORT

Buccal mucosa tumour around the parotid papilla

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SUMMARY

We present a case of a 50-year-old male patient with a lump around the right parotid papilla. A 25×20 mm soft pendulous lump was identified around the right parotid duct. After obtaining non-malignant results from a tissue biopsy, we resected the tumour to preserve the right parotid duct under local anaesthesia. The patient had an uncomplicated postoperative course and maintained normal salivary secretion function. Based on the histopathological features, the lump was thought to have developed secondary to being repeatedly bitten. Several cases of parotid duct disease have been reported, but a literature search revealed that the present case is rare.

BACKGROUND

The parotid gland is one of the major salivary glands. Saliva production from the parotid gland comprises 25% of that from all salivary glands, and this gland is mainly a serous salivary gland.¹ It has a vital role not only in saliva production, but also in the oral environment. The present case involved a fibroepithelial polyp around the right parotid duct. We were able to resect the tumour with preservation of the right parotid duct and maintain normal saliva secretion from the right parotid gland.

CASE PRESENTATION

A 50-year-old male patient noticed a lump in his right buccal mucosa, but he did not pursue examination because it caused no discomfort for about 5 years. He visited a nearby dental clinic for evaluation of pain of the right middle molar teeth (17 and 46) on 30 July 2011. He was referred for investigation and treatment of the lump and extraction of teeth 17 and 46. He reported no previous injuries in this region. His medical history included hypertension and acute upper respiratory inflammation. His family history revealed no appreciable diseases, and his prescription history included amlodipine, simvastatin and loxoprofen.

INVESTIGATIONS

A pedunculated and elastic lump was present around the right parotid papilla. It was 25×20 mm and had no red flare or induration (figure 1). The right molar teeth (17, 18, 46 and 47) all showed grade II mobility and class III alveolar ridge deficiency on panoramic radiographs. Not only was his oral and general status non-inflammatory, but also his submandibular lymph nodes and facial appearance were not swollen. He had bitten the lump many times between teeth 18 and 47, which were buccally inclined teeth. However, he had never felt pain associated with the lump. At the initial visit (2 August 2011), we extracted teeth 18 and 47 under infiltration anaesthesia to eliminate factors that might have influenced the development of the lump. On 3 August 2011, we biopsied the upper and lower aspects of the lump. Pathological examination revealed the lump to be 'eroded oral mucosa'. Histologically, outgrowth of hyalinising collagenous fibres was present with no evidence of salivary gland tissue and no malignant findings. We did not perform an ultrasound examination because ultrasound has poor detail resolution and we believed that the patient had a mass, not a cyst, based on palpation. In addition, we were able to insert a bougie into the parotid duct, confirming that the parotid duct was not destroyed.

DIFFERENTIAL DIAGNOSIS

Differential diagnoses of the lump around the parotid papilla included a parotid gland tumour, parotid duct tumour, buccal mucosa tumour and salivary stone within the parotid duct. The lump contained no hard tissue when palpated with a fingertip at the initial visit; therefore, we excluded the presence of a salivary stone within the parotid duct. Pathological examination revealed that the lump was not derived from the salivary gland or duct; thus, we also excluded parotid gland and duct tumours. We finally suspected that the lump was a buccal mucosa tumour, and this was our clinical diagnosis.

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Figure 1 Oral photograph at the initial visit. The lump was a 25×20 mm soft, pendulous mass around the right parotid duct.

Figure 2 Intraoperative oral photograph after removal of the lump. The preserved parotid duct was extended by the lump. We relocated the opening of the parotid duct mesially from its initial position. We sutured the parotid duct and buccal mucosa with a 4-0 nylon thread.

TREATMENT

We inferred that the lump was not derived from salivary gland tissue, but was of an obscure aetiology. On 25 August, we surgically resected the right buccal mucosa tumour under intravenous sedation. First, we inserted a bougie to assess the state of the parotid duct. We established a 5 mm margin from the opening of the parotid duct and created an incision line with crystal violet. We then made an incision with a #15 scalpel blade and resected the lump from the parotid duct with a needle-shaped electrosurgical knife and Metzenbaum scissors after infiltration of 2% xylocaine (4.5 ml). We removed the lump with the needle-shaped electrosurgical knife after its perfect separation from the surrounding tissue. Separation was very difficult because of strong adherence between the lump and the parotid duct. The preserved parotid duct was extended by the lump, so we could not replace it without an additional procedure. Next, we created an incision line parallel to the occlusal plane mesially from the base of the parotid duct. We sectioned and exfoliated the tissue to create a space in which to place the parotid duct in the buccal mucosa. Finally, we sutured the surgical wound with a 4-0 nylon thread (figures 2 and 3).

OUTCOME AND FOLLOW-UP

The patient was discharged from the hospital the day after surgery because he felt no pain and had no symptoms of

Figure 4 Histopathological photomicrograph. The definitive diagnosis of the resected lump was a fibroepithelial polyp with increased collagen tissue and no cellular atypism.

infection. We prescribed an antibiotic (amoxicillin 750 mg, three times a day after every meal). No disorders of salivary secretion from the parotid gland or postoperative complications were present when we removed the stitches on 1 September 2011. The definitive diagnosis of the resected lump was a fibroepithelial polyp characterised by increased collagen tissue and no cellular atypism (figure 4). The surgical wound tissue healed and normalised, and the patient was doing well as on 20 September (figure 5).

DISCUSSION

An understanding of how a lesion is derived is very important because it provides information necessary to make decisions regarding the operative procedure. Many cases of disorders of the parotid duct and around the parotid papilla have been reported, including rhabdomyosarcoma, squamous cell carcinoma and inverted ductal papilloma.²⁻⁴ If the parotid duct is affected by a malignant neoplasm or a neoplasm derived from the parotid gland and parotid duct, at least a part of the parotid duct must be resected and reconstructed.⁴ However, this case involved a fibroepithelial polyp with increased buccal mucosal tissue around the parotid papilla. The lump was not derived from the parotid gland or parotid duct, and we were able to preserve the parotid duct morphologically and functionally. This procedure allowed the patient to maintain saliva production and

Figure 3 Series of schemata of the operative procedure. #1 The opening of the parotid duct. #2 Showing 5 mm margin from the opening of the parotid duct. #3 An incision line parallel to the occlusal plane mesially.

Figure 5 Oral photograph a month after surgery. The surgical wound tissue healed and normalised.

the oral environment. The most difficult aspect of this case was the blunt exfoliation of the lump with preservation of the parotid duct. It was also important to avoid affecting the function of salivary secretion because the parotid duct was extended by the lump. We relocated the opening of the parotid duct mesially from its initial position, but the salivary secretion from the right parotid gland did not change. Therefore, the patient had no resultant problems in daily life. This operative method was very simple and minimally invasive. The cause of the lump was suspected to be a scar that had been repeatedly bitten between teeth 18 and 47; separation of the parotid duct from the lump was very difficult. In one case, preservation of the salivary duct was reportedly achieved with an ultrasonic surgical aspirator.⁵ It was easily separated, but specialised equipment was required. Another method involves resection of the tumour and reconstruction of the parotid duct, but this technique requires a vein and involves a risk of occlusion. Our method was versatile in

spite of some limitations. The patient told us that he had no previous injuries in the right buccal mucosa. Teeth 18 and 47 were severely maloccluded, so we suspected that they might have caused him to bite the parotid papilla and potentially contributed to the formation of the lump. Based on a literature search, many cases of disease derived from the parotid gland or parotid duct have been reported, but the present case is rare.

Learning points

- ▶ This operative method is very simple and minimally invasive. No disorders of salivary secretion from the parotid gland or postoperative complications occurred.
- ▶ Many cases of disease derived from the parotid gland or parotid duct have been reported, but this case is rare.
- ▶ The cause of the lump was suspected to be a scar that had been repeatedly bitten. The lump was suspected to be the result of malocclusion.

Competing interests None.

Patient consent Obtained.

Provenance and peer review Not commissioned; externally peer reviewed.

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