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Warthin's Tumor of the Parotid Enlarged by a Facelift Suture

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Warthin's tumor is the second most common benign neoplasm of the salivary gland, consisting of epithelial and lymphoid components. It is generally asymptomatic and slowly growing. Sudden increase

in its size is usually a consequence of malignant change, or inflammation.

We report a case of a 48-year-old male presenting with a recently enlarged mass of the left parotid gland. He had undergone a facelift procedure with barbed suture, a "threadlift" before this change in size. Histopathological findings reported a Warthin's tumor with focal inflammation. The tumor with its embedded suture material was totally excised without complications.

Facelift methods have evolved over the past several decades, and many patients prefer minimally invasive procedures including suture suspension techniques. Although rare, such procedures should be performed after thorough evaluation and management of any pre-existing conditions however benign they may seem.

A 48-year-old male presented with a rapidly growing mass in his left preauricular area. The patient had had a small mass in this area, approximately 5 mm in diameter since about 15 years ago, and did not recall any period of notable growth before. Sudden growth in size began one month prior to his visit, with no history of preceding infection or trauma. He had received a facelift procedure three months beforehand.

Physical examination revealed a firm, fixed, nontender mass with a dimension of about 3 × 2 cm. The overlying skin had no infection signs, and facial



Fig. 1. Preoperative computed tomography findings show heterogeneously enhancing mass (red arrow) with mixed densities measuring about 2.6 × 2.6 cm in the posterior aspect of the left parotid gland. Left internal jugular lymph nodes were also enlarged.

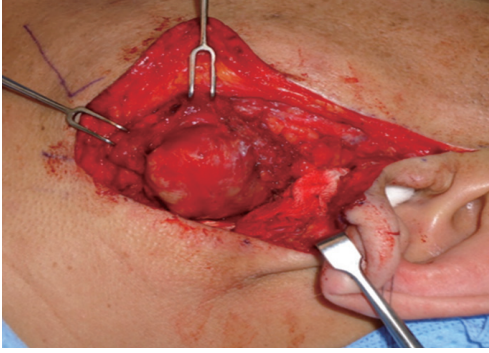


Fig. 2. Intraoperative view after elevation of the skin flap and dissection of the protruding mass.

animation was symmetric and normal.

Computed tomography (CT) of the facial area showed a 2.6×2.6 cm sized heterogeneously enhancing well defined mass with mixed density, located in the boundaries of the left parotid gland (Fig. 1). An intraparotid lymph node was also enlarged to a size of 1.2×1.7 cm, with homogenous enhancement. Pleomorphic adenoma was the suggested radiological diagnosis, and so superficial parotidectomy was planned.

A lazy S-shaped incision was placed into the preauricular skin, the skin flap elevated to expose the parotid gland. A 2.5×2.5 cm sized brown, rubbery, encapsulated mass withholding focal pockets of pus-like material was found in the posterior aspect of the gland protruding from its superficial surface (Fig. 2). The pus pockets were located around a clear strand of suture material penetrating the mass (Fig. 3). A smaller, light brown, rubbery lesion was found caudal to this larger mass. Total excision of both lesions was done, and both were immediately sent to the pathology department for frozen biopsy diagnosis. The larger mass was found to be a Warthin's tumor, and the smaller, a reactive lymph node. There being no indication for further parotidectomy, the operation was finalized with the excision of both masses. Irrigation, bleeding control and closure was performed with insertion of a 100 mL negative suction drain.

Histopathological analysis showed a cystic structure, consisting of a palisading arrangement of oncocytic columnar cells with underlying discontinuous basal cells correlating with Warthin's tumor. Focal areas of inflammation with an abundance of neutrophils and macrophages were noted in the cystic spaces (Fig. 4).

The patient's wound healed well with no fluid



Fig. 3. The well demarcated, rubbery specimen with a diameter of about 2.5 cm is seen on the left, along with the clear suture material that was embedded into the mass.

collection or infection signs, and upon three months follow-up, no evidence of recurrence or wound complications was noted.

Warthin's tumor is the second most common benign tumor of the parotid, occurring almost exclusively in the parotid gland and periparotid lymph nodes. It typically presents in males between the age of 50 to 60 as a well circumscribed, slowly growing mass in the inferior pole of the parotid gland. This entity can be surgically removed with a narrow margin of glandular tissue. It is multicentric in 12% to 20% of cases, and bilateral in 5% to 15%. While some may be asymptomatic, others may present with pain, facial nerve weakness, ipsilateral otalgia, tinnitus or hearing difficulties [1].

Because growth is slow, and the incidence of malignant transformation is low, patients who have high operative risk may choose to be observed. However, any rapid change in growth must be evaluated for inflammation or malignant transformation. Acute growth in size with accompanying pain may be caused by retrograde infection from the oral cavity [1]. There have been reports of parotitis induced after fine needle aspiration was done on parotid Warthin's tumors, the pathogenesis hypothesized to be infarction and subsequent inflammation [2].

This case is one in which sudden growth of a preexisting Warthin's tumor was caused by an inflammatory process initiated by a penetrating facial suspension suture. As in the studies on fine needle aspiration induced infection, the authors suspect that the inflammatory process in this case was caused by either (1) injury of blood vessels that led to reduced perfusion, (2) foreign body reaction to the suture material, or (3) both.

In 2011, Sulamanidze et al. [3] reported the largest

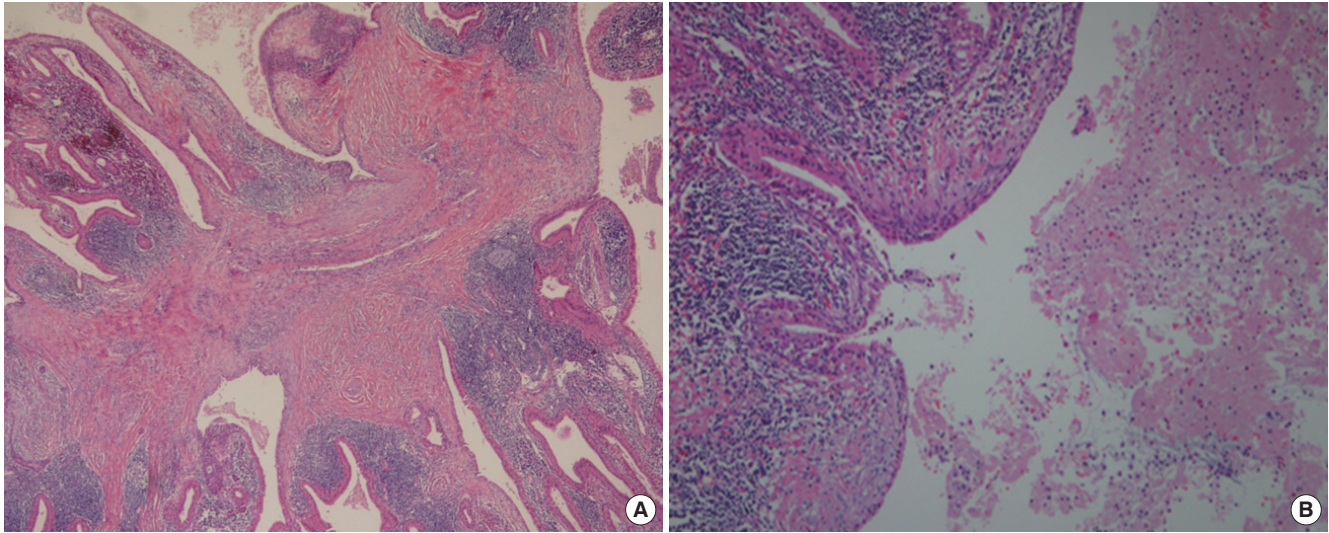


Fig. 4.

Histopathological findings. A palisading structure of columnar cells sitting on top of basal cells is seen. Focal regions of inflammatory cells are seen in between. H&E, (A) $\times 40$, (B) $\times 400$.

study on thread-lifts using polypropylene anti-ptosis (APTOS) threads in the literature. They found that 609 complications occurred for 6,098 patients, asymmetry being the most common (3%), followed by contour irregularities (2.8%) and early relapse (2.7%). However, this low rate of relatively minor complications differs from other reports. Bruising, infection, pain, pinching sensation, visibility of threads, ear numbness, and foreign body sensation has been noted in up to over 60% of patients in different studies [4]. Wu [4], in his 2004 report found that nine of a total of 102 patients experienced palpable thread ends with pain, eight were found with thread migration, and five with infection or granulomas. Goldan et al. [5] described a case of a 57-year-old woman with an scarring after APTOS threading, the scar biopsy revealing an epidermal inclusion cyst.

Although the probability of positive findings is not high, we recommend evaluation for any abnormal structure concerning the field of operation. Patients undergoing cosmetic surgical procedures involving the facial soft tissue are very unlikely to agree to a costly imaging study or examination, especially in South Korea where national insurance does not cover aesthetic medical fees. However, this case is a reminder that any mass located in the vicinity of the area involving aesthetic procedures should be evaluated prior to surgery, and would best be treated.

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