Dear Editor,

In their article "Features of parotid gland diseases and surgical results in southern Taiwan," Kuo et al discussed the features of parotid tumors in southern Taiwan [1]. The most common benign parotid tumor was the pleomorphic adenoma. In malignant parotid tumor disease, the most common tumor was the acinic cell carcinoma. In their study, 25.7% of patients with a malignant parotid tumor received radiotherapy. No patient in the benign group received radiotherapy. We report a new case in which a patient with a benign parotid tumor received radiotherapy following a radical parotidectomy.

A 57-year-old male patient presented with a nontender mass over the left pre-auricular area. A biopsy over the left parotid gland was performed and the resulting pathology report was benign. However, the following CT scan showed a persisting enlargement of the left parotid mass with suspected skull base invasion. Thus, a radical parotidectomy was arranged. The resulting pathology report showed a giant cell tumor of the parotid gland. Postoperative adjuvant radiation therapy was performed due to the negative safety margin.

A giant cell tumor generally is considered a benign tumor originating from the bone. Extraosseous giant cell tumors were first described by Eusebi et al in 1984 [2]. The giant cell tumor of the parotid gland is a rare, primary soft tissue tumor with a low potential of malignancy. It is pathologically and clinically similar to the giant cell tumor of the bone. Although the two tumors might be indistinguishable morphologically, several clinical clues and histologic features aid in their differentiation. The giant cell tumors of the parotid gland are biologically more aggressive. Morphologically they may show decreased mitotic activity, lack of reactive bone formation at the periphery of the tumor, and they are often admixed with a mononuclear component [3]. The resected specimen of our patient shows a picture of a giant cell tumor composed of uniformly distributed osteoclast-like giant cells, admixed with mononuclear cells and a lack of bone formation at the periphery of the tumor (Fig. 1). The giant cells are large, multinucleated (10–50 nuclei), positive for CD68, and negative for cytokeratin, S100, and HMB-45. Mitotic activity measures up to 2/10 HPF, and atypical mitosis as well as cytological atypism are absent.

The basic treatment for a giant cell tumor is extensive resection of the focus area, which allows for a sufficient margin of the surrounding normal tissue [4]. Giant cell tumors are radiosensitive, and radiotherapy is highly effective. Radiotherapy is a reasonable option in a situation in which negative surgical margins only can be achieved with unacceptable morbidity or if surgery is contraindicated [5].

In summary, surgery is the treatment of choice for a patient with a resectable giant cell tumor. Radiotherapy is a reasonable option if surgery is contraindicated or surgical margins cannot be achieved. The interest of this case lies in the patient with a benign parotid tumor receiving a radical parotidectomy followed by adjuvant radiation therapy. Because so little is known about giant cell tumors of the parotid gland, we present this rare case and review the related literature. We hope to promote

Figure 1. Histologic features of biopsy specimen. Hematoxylin and eosin stain displays the uniformly distributed osteoclast-like giant cells (arrow), admixed with mononuclear cells (white arrow) (left parotid: original magnified by 400).
awareness and consideration of giant cell tumors in the differentiated diagnoses of parotid gland masses.

References


