

Chapter 11

Benign Tumors of the Parotid Gland

ABSTRACT

Benign tumors of the salivary glands are varied and named after their cell type. They occur most commonly in the parotid gland, and the majority (approximately 80%) are pleomorphic adenoma. This benign tumor arises from the superficial lobe of the gland in approximately 80% of cases. Less commonly, the mass presents as a cheek mass overlying the masseter muscle, arising from the accessory parotid lobe. If the tumor arises from the deep lobe, it presents as a para-pharyngeal mass with a completely different clinical presentation. In this instance, the patient will complain of snoring and difficulty in swallowing. Physical examination will reveal a soft palate and tonsillar, diffuse bulge, which is firm in consistency. Malignant transformation is extremely rare. Ultrasonography, computed tomography scan and magnetic resonance imaging are the best imaging tools. Treatment is usually through superficial or total conservative parotidectomy, with preservation of the facial nerve.

PLEOMORPHIC ADENOMA (PA)

Incidence

Pleomorphic adenoma, the most common salivary gland tumor, is also known as benign mixed tumor because of its dual origin from epithelial

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and myoepithelial elements. It constitutes up 75-80% of all benign parotid tumors (McLoughlin, 2019; Lee, 2019; Meshram, 2018). It may affect as well the submandibular and minor salivary glands. Its incidence is slightly higher in females, and affects most commonly patients between 30 to 50 years of age (Bueting, 1998; Honda, 2005; Kici, 2001). Though uncommon, it has been reported in the first two decades of life. It is uncommon to be bilateral (Eveson, Kusafuka, & Stenman, 2005). It is usually a solitary lesion, although synchronous or metachronous involvement of two or more salivary glands can occur. It may also occur in combination with other tumors, mostly Warthin's tumor.

Etiology

The etiology of pleomorphic adenoma is unknown, but the incidence of this tumor has been increasing in the last two decades in relation to the exposure of radiation. One study suggested that oncogenic simian virus (SV40) may play a role in the onset or progression of pleomorphic adenoma. Prior head and neck irradiation is also a risk factor for the development of these tumors (Gündüz, Yeşiltaş, & Shields, 2018).

Pathology

It is a well-defined tumor, but with small extensions into the adjacent normal tissue through an incomplete capsule, which explains recurrence after enucleation. It has a pleomorphic matrix, with a non-cystic cut-section that may show some islets of cartilage. *Microscopically*, it is formed of epithelial cells intermingled with a pleomorphic stroma; fibrous, myxomatous and pseudo-cartilaginous (Figure 1). It is categorized into 4 types as follows (Chaplin, Darke, & Patel, 1983): (1) principally myxoid, (2) mixed myxoid and cellular components in equal proportions, (3) predominantly cellular, and (4) extremely cellular.

The tumor carries a malignant potential of 5-10%. The presence of hyalinized stroma is the most predictive histological parameter of malignant transformation. It may rarely metastasize without having the histological features of malignancy, but this almost always occurs after inadequate surgical excision, possibly due to altered anatomy secondary to surgery, which gave access to vascular and lymphatic channels.

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