

Chapter 12

Recurrent Pleomorphic Adenoma

ABSTRACT

This chapter discusses the etiology, clinical presentation, assessment, and treatment of recurrent pleomorphic adenoma. Recurrent tumor following surgery (or any other treatment) usually presents as a recurrent swelling at the primary site, with or without local symptoms. The incidence of recurrence following surgery varies depending on surgical technique, surgeon's experience, duration of follow-up, and clinical integrity. A recurrence rate of less than 1% is generally considered acceptable. The best policy to prevent recurrence of pleomorphic adenoma is excisional biopsy of the tumor with maximal safe margin and functional neurological preservation. Treatment is determined by the age and physical health of the patient, number of previous operations, and anatomical extent of the recurrence. Treatment options include observation, local excision, superficial parotidectomy, total conservative parotidectomy, total parotidectomy with resection of the involved nerve and immediate nerve graft (any procedure is followed by radiotherapy), and radiotherapy alone.

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CAUSES OF RECURRENCE

Multicentricity

Pleomorphic adenomas (PAs) are unifocal disease in the major salivary glands; surgeons and pathologists *no* longer support this theory.

The Bare Area

The tumor capsule may vary in thickness from very thin (a few cells) to very thick; this variation may occur on the surface of the same tumor (Stennert, Guntinas-Lichius, Klaussmann, & Arnold, 2001). Because many PAs have a nodular surface, there is always the possibility of a nodule attached by a narrow stalk becoming separated from the main tumor mass thus giving rise to a recurrence (Webb & Eveson, 2001).

Pseudopodia (microscopic finger-like formations of tumor tissue extending beyond the main mass of tumor) are a significant risk factor for local recurrence of Pas (Chen, 2004; Hendriksson, 1998). This is known as “*capsule penetration*”, which occurs earlier and is more common in the bosselation process (Lawson, 1989). In capsular perforation, the tumor cells perforate the capsule and lie adjacent to the normal parotid tissue. Subcapsular splitting may be no more than a dehiscence resulting from peri-operative handling, and the presence of blood within the split would support this hypothesis. Another publication (McGregor, Burgoyne, & Tan, 1988), confirmed that no tumor has a smooth surface, and all tumors have a “bare- area”.

The bare area is *not* always exposed to the facial nerve and may occur at any location along the tumor surface. The surgeon should carry out a wide local excision with the tumor contained within as much normal tissue as is possible. The bare area or deep surface of the tumor can lie against the cartilaginous external auditory meatus, styloid process, facial nerve, or masseter muscle.

Tumor Rupture

Rupture of the tumor, because of overzealous traction, instrument compression, rough handling, or poor surgical technique, with spillage into the surgical wound are factors which have been thought to predispose to recurrence.

The interior of a PA is usually soft and gelatinous, and it is these myxoid and friable cellular tumors that are at highest risk for rupture (McGregor,

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