

slow-growing. They may be large enough to impair tongue movement with speech difficulty or to prevent wearing a lower denture (Figure 9.4). Occasionally they may cause obstruction of Wharton's duct either due to pressure or malignant infiltration and present with a submandibular swelling. Virtually 100% of these tumors are malignant and involvement of the lingual nerve or hypoglossal nerve with ipsilateral anesthesia or weakness of the tongue may be seen. Examination by palpation reveals a firm to hard mass that may be tender and fixed to the lingual periosteum. Infiltration of the tongue muscles with slurring of speech or dysphagia can occur.

The only other entity on the differential diagnosis is a ranula, which can resemble a cystic tumor.

Imaging is usually by CT or MR. CT scans will be more accurate for early cortical bone invasion (Figure 9.5). In MR imaging T1 weighted signal intensity of carcinomas in and near the sublingual gland is lower than the gland, whereas T2 weighted signal intensity of carcinomas exceeds that of the gland (Sumi et al. 1999).

In the sublingual gland histologic diagnosis is accomplished by incisional biopsy through the overlying oral mucosa.

Management

SUBMANDIBULAR GLAND TUMORS

As in all salivary gland tumors surgery is the primary modality of treatment. When the diagnosis is established preoperatively as benign PA by FNAB, then an extracapsular excision of the submandibular gland is indicated (Figures 9.6 and 9.7). Pleomorphic adenomas should be treated in the same manner as for the parotid gland (see chapter 8). There is some evidence that the capsule of PAs in the submandibular gland is thinner than in the parotid (Webb and Eveson 2001), and it is important to maintain a margin of normal tissue around the tumor. If the entire gland and tumor is not removed but the PA merely enucleated, there is a higher risk of recurrence (Laskawi et al. 1995). In this dissection it is easy to maintain a little extra fat and connective tissue over areas where the PA may approach the surface of the gland (Figure 9.8). In a series of 15 PAs of the submandibular gland 20% were in the surface of the gland



Figure 9.6a. The incision for submandibular gland tumor removal lays approximately 1–2 finger-breadths below the lower border of the mandible and is placed in a natural skin crease.

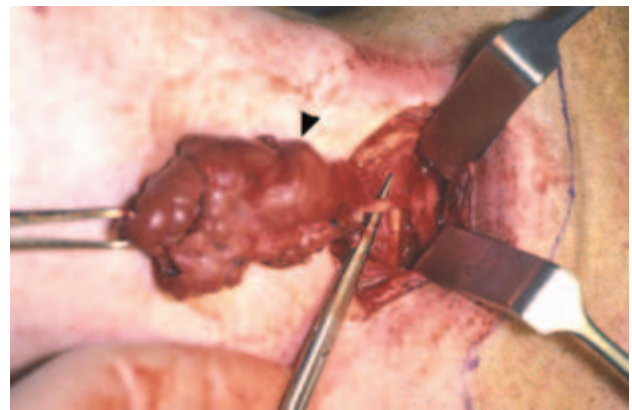


Figure 9.6b. The submandibular gland is separated from its duct, which is indicated by the sharp scissors. The arrow points to the tumor in the hilum.