SURGERY AND COMPLICATIONS Submandibular gland rese

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The submandibular gland is surrounded by important struc tures and its removal is fairly straightforward if planned well. The approaches to the submandibular gland are transcutane ous (such as lateral transcervical, submental and retroauricular) or transoral. Visualisation during the various approaches can be impro ved with endoscopic or robotic assistance, potentially reducing complications. Summary box 54.6 Important anatomical relations to the submandibular gland /uni25CF /uni25CF /uni25CF /uni25CF /uni25CF Planning the surgery Decision making is determined by the nature of the disease. In benign lesions only the gland is removed, preserving stage and histology , there may be a consideration for a supra - omohyoid neck dissection involving levels I–III. Anaesthesia General anaesthesia is usually preferred unless there is any contraindication, in which case local anaesthesia may be considered. Incision The incision planned should ensure complete access to the tumour, be extendable to encompass intraoperative surprises and be safe and cosmetically acceptable. The standard incision is placed in a neck crease at least two finger breadths below the mandible. The horizontal incision is along the lines of relaxation, which results in a cosmetic scar (Figure 54.11a). Flap elevation After incising the skin the platysma is exposed and divided in the same plane. The skin is retracted with skin hooks and the flap is elevated in the avascular subplatysmal plane, taking care that the veins remain in the investing fascia. The flap is elevated up to the attachment of the platysma on the mandible, which helps in identification of the marginal mandibular nerve (Figure 54.11b). Marginal mandibular nerve preservation The fascia above the facial vessels is palpated in the midportion of the body of the mandible. The nerve is usually identified in the fascia above the vessels and is dissected along its path horizontally to expose it as it exits the parotid and traverses onto the muscles anteriorly . Gland mobilisation The facial vein and artery are ligated below the marginal nerve, exposing the lower edge of the body of the mandible. - The submandibular gland is now retracted downwards and outwards to expose the mylohyoid muscle (Figure 54.11c); the - fascia overlying the submandibular gland is dissected, exposing the submental artery and vein, which are secured and ligated. The lateral edge of the mylohyoid is delineated and retracted with a curved retractor. This exposes the deeper portion of the submandibular gland as well as Wharton’s duct. The submandibular gland is then retracted downwards to expose the lingual nerve (Figure 54.11d) and the connecting subman - dibular ganglion, which is divided. The gland is then retracted superiorly and posteriorly , exposing the deep fascia alongside the ranine veins above the hypoglossal nerve (Figure 54.11e). Wharton’s

duct is then clamped, divided and liga ted close to the floor of the mouth to prevent retention of debris or stones, reducing the chance of infection. The gland is retracted downwards and laterally , exposing the facial artery above the common tendon of the digastric muscle. The facial artery is clamped, divided and ligated, completing the gland excision. Malignant submandibular tumours Treatment for low-grade tumours that are less than 4 /uni00A0 cm with - out extraparenchymal spread is submandibular gland removal with clearance of the perivascular group of lymph nodes around

Lingual nerve Hypoglossal nerve Marginal mandibular branch of the facial nerve Anterior facial vein Facial artery

(b) Skin crease incision Subplatysmal /f_l ap (c) Mylohyoid muscle retracted Mylohyoid muscle SM gland retracted down and laterally Figure 54.11 (a) Submandibular (SM) pleomorphic adenoma: clinical presentation and T1-weighted magnetic resonance imaging with contrast view showing the tumour. (b) A horizontal skin crease incision, subplatysmal /f_l ap elevation and identi /f_i cation of the marginal mandibular nerve. (c) The gland is retracted downwards and outwards to identify and retract the mylohyoid muscle to locate the lingual nerve. Marginal nerve Lingual nerve and SM ganglion Deep part of SM gland

the facial vein. In high-grade tumours, supraomohyoid neck dissection (levels I–III) is recommended, whereas node-positive tumours require a comprehensive neck dissection (levels I–V). For tumours with extraparenchymal spread, radical clearance of the involved structures along with a formal comprehensive neck dissection is required. Closure Haemostasis is achieved and an antiseptic wash is given. Intraoral communication is ruled out before placing a suction drain over the mylohyoid with the tip pointing laterally to prevent migration into the oral cavity . The wound is closed by approximating the platysma with absorbable sutures and the skin with absorbable or non-absorbable sutures. Complications Nerve palsy The proximity of the three nerves (marginal division of the facial, lingual and hypoglossal) to the submandibular gland makes them susceptible to injury . Care should be taken, espe - cially in recurrent sialadenitis, which causes dense adhesions, increasing the possibility of nerve injury . Haemorrhage The facial artery and the ranine veins along the hypoglossal are notorious for postoperative haemorrhage and should be double-checked prior to closure.

Hypoglossal nerve (e) SM fossa Figure 54.11 (d) The gland is retracted downwards and outwards to identify the hypoglossal nerve and the facial vein and artery before removing the gland. (e) The submandibular fossa after tumour-laden gland removal and closure with subcuticular sutures. SM gland retracted up Facial vein above the Facial artery exposed on digastric retracting SM gland

below SM gland Subcuticular with tumour sutures

Revision #1
Created 2025-12-31 15:20:38 UTC by Omar Ayman
Updated 2025-12-31 15:20:38 UTC by Omar Ayman