Introduction

Salivary glands are located around the mouth. The salivary glands are divided into major and minor salivary gland categories. The major salivary glands are parotid, submandibular and the sublingual glands. The minor salivary glands are clusters of secretory cells scattered throughout the upper aero digestive tract. The major function of the salivary glands is to secrete saliva, which plays a significant role in lubrication, digestion, immunity and the overall maintenance of homeostasis within the human body **(laramore et al. 2003)**.

The major salivary glands develop from the 6th-8th weeks of gestation as out pouchings of oral ectoderm into the surrounding mesenchyme. The first of the glands to appear during the sixth gestational week is the primordial parotid gland **(Silvers and Som, 1998).**

The parotid gland represents the largest salivary gland; the gland is situated in the space between the posterior border of the mandibular ramus and the mastoid process of the temporal bone. The external acoustic meatus and the glenoid fossa lie above together with the zygomatic process of the temporal bone. On its deep (medial) aspect lies the styloid process of the temporal bone. Inferiorly, the parotid frequently overlaps the angle of the mandible and its deep surface overlies the transverse process of the atlas vertebra **(laramore et al. 2003)**.

Acute sialadenitis may involve any salivary gland, though the major salivary glands, particularly the parotid, are most commonly affected. Causes may be bacterial or viral. This entity typically presents unilaterally

with localized erythema, swelling and tenderness in the affected region. Purulent exudate can often be expressed from the excretory duct orifices. Acute viral sialadenitis, in contrast, is preceded by prodromal symptoms including fever, myalgia and headache and is typically bilateral **(Peel , 2001).**

Sialolithiasis is a relatively common disorder of the salivary glands characterized by the developmentof calculi. Sialolithiasis is thought to affect approximately 1% of the population based on autopsystudies. Sialolithiasis results from the deposition of calcium salts within the ductal system of salivary glands. The salivary stones are comprised primarily of calcium phosphate with traces of magnesium and ammonia with an organic matrix consisting of carbohydrates and amino acids. Historically, it has been taught that salivary stones develop around a central nidus of any number of elements, including desquamated epithelial cells, foreign bodies, microorganisms and mucous plugs. Progression occurs once the nidus becomes lodged within the salivary ductal system **(Kasaboglu et al. 2004).**

Tumors of salivary gland tissue constitute about 5% of head and neck tumors and affect major salivary glands five times more often than minor salivary glands. The incidence of malignancy among salivary gland tumors varies inversely with the size of the gland. About 15% of parotid tumors, 50% of submandibular gland tumors, and 90% of minor salivary gland tumors are malignant (**Spiro, 2003).**

The most common benign salivary gland tumor is the benign mixed tumor or pleomorphic adenoma, which accounts for 70% of parotid tumors and 50% of all salivary gland tumors. Mixed tumors are more common in

women than in men, with the peak incidence in the fifth decade. They are slow-growing and lobular and may become very large without interfering with facial nerve function (**Spiro, 2003).**

While tumors of salivary glands can appear at any age, the maximum incidence is in the 4th decade of life for benign lesion and in the fifth decade for malignant tumor though different authors consider the peak incidence corresponds to the period between the 5th and 7th decades of life **(Elledge, 2009).**

The diagnosis of salivary glands tumors utilizes both histological and radiographic studies. Histopathological sampling procedures include fine needle aspiration (FNAC) and core needle biopsy. Fine needle aspiration cytology is quick and safe, it can be used to determine the correct diagnosis in up to 95% of patient **(Bahar et al. 2006).**

Diagnostic imaging techniques for salivary gland tumors include ultrasound(US),computer tomography(CT), and magnetic resonance imaging(MRI) are excellent tools to evaluate salivary glands tumors, providing important diagnostic information about overall dimensions, adjacent tissue infiltration and vascular or perineural invasion. Also, positron emission tomography (PET) is the only imaging technique that can image biochemical and biological processes that are fundamental to disease **(Koyuncu et al. 2003).**

Neoplasms are the most common indication for parotidectomy. The vast majority of primary parotid tumors are benign, but approximately 20% are found to be malignant. In addition, regional and distant disease can

metastasize to the parotid and necessitate removal for diagnosis or cure. Inflammatory processes (eg, chronic parotitis, deep salivary calculi, or parotid abscess) are occasionally treated with total parotidectomy, with the recognition that surgery in an inflamed gland probably carries a higher risk of postoperative facial nerve dysfunction **(Motamed et al . 2003).**

Post operative complications include early facial nerve injury, hemorrhage, hematoma ,infection, seroma, fistula &flap necrosis late frey**'**s syndrome, Trismus, recurrence, hypertrophic scar and cosmetic deformity **(Michael et al. 2007)**.

Post operative radiotherapy used in selected case includes high-grade malignancy large malignancy, perineural or perilymphatic invasion or nodal metastases. Chemotherapy is used for palliative treatment of recurrent unresectable tumor and metastases **(Johnson et al. 2007).**