

4th class / Pathology lecture (6)

Oral cavity

Oral cancer: Majority are squamous cell carcinomas.

Squamous cell carcinoma (SCC) of oral cavity is **multifactorial disease** usually seen in middle-aged men.

Pathogenesis

The development of squamous cell carcinoma is a **multistep process**. It involves sequential activation of oncogenes and inactivation of tumor suppressor genes in a clonal population of cells.

- **Inactivation of the *p16* gene** (about 80% of the cases) .
- **Mutation of the *p53* tumor suppressor gene** is associated with progression of hyperplasia/hyperkeratosis to dysplasia.
- **Amplification and overexpression of the *cyclin D1* gene** constitutively activates cell cycle progression

Spread

1. **Local:** Tissue involved depends on the primary site.
2. **Lymph node:** The involved site of lymph node depends on the location of the primary tumor. The more anterior the tumor, more is the spread to the cervical nodes. Carcinomas of the base of the tongue and oropharynx metastasize to the deep retropharyngeal lymph nodes.
3. **Blood spread:** It spreads to lungs, liver, and bones.

Pleomorphic adenoma

Pleomorphic adenoma is a **most common benign tumor of the salivary glands**, characterized by an **admixture of epithelial and stromal elements**, and is also called **mixed tumors**. In pathology, the term "pleomorphic" is used to indicate nuclear variation (size and

shape of nuclei) in neoplasm. However, the term pleomorphic adenoma is used because of variable cell type seen in this lesion.

Age: It occurs usually during **third to fifth decade** of life (middle-age).

Sex: It is most frequent in **females**.

Site

- **Major salivary gland:** Common site and constitute about 60% of tumors in the parotid. Usually arise in the **superficial lobe of the parotid**. Less common in the submandibular glands and very rare in the sublingual gland.

-**Minor salivary gland:** Its involvement is relatively rare.

Etiology

Not known. Exposure to radiation increases the risk.

Warthin tumor

Warthin tumor (**papillary cystadenoma lymphomatosum, adenolymphoma**) is a **benign** and the **second most common** salivary gland neoplasm.

-**Site:** It almost **exclusively** arises in the **parotid gland**.

- **Sex:** It is the only salivary glands tumor that is more **common in males** than in females.

- **Age:** It usually occur between **fifth to seventh** decades of life.

_ **Predisposing factor:** **Smokers** have eight times the risk of nonsmokers.

Mucoepidermoid carcinoma

Most common primary malignant tumor of the salivary glands.

Incidence

- Constitute about 15% of all salivary gland tumors.
- Occur mainly (60–70%) in the parotids.
- Account for a major fraction of the minor salivary gland tumors.