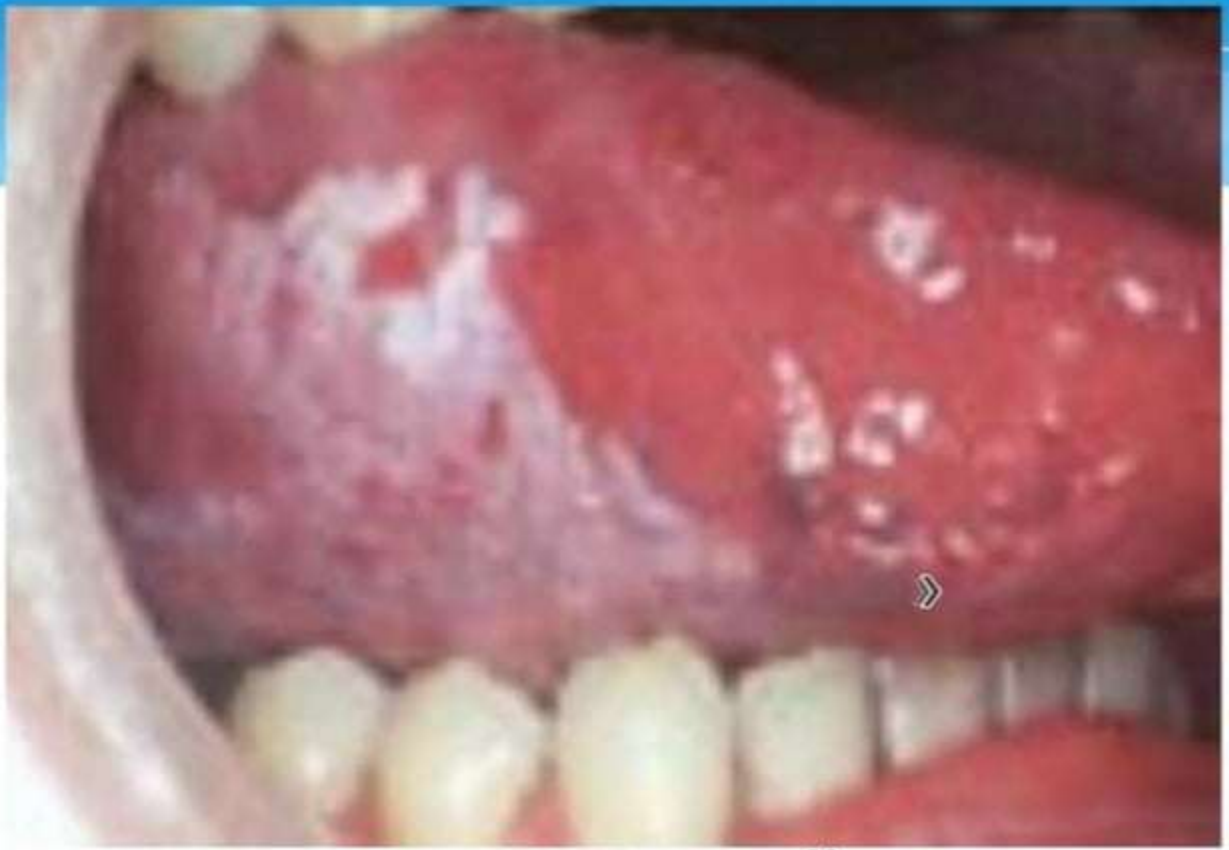
Oral Cavity 2

Lecture 2

Definition

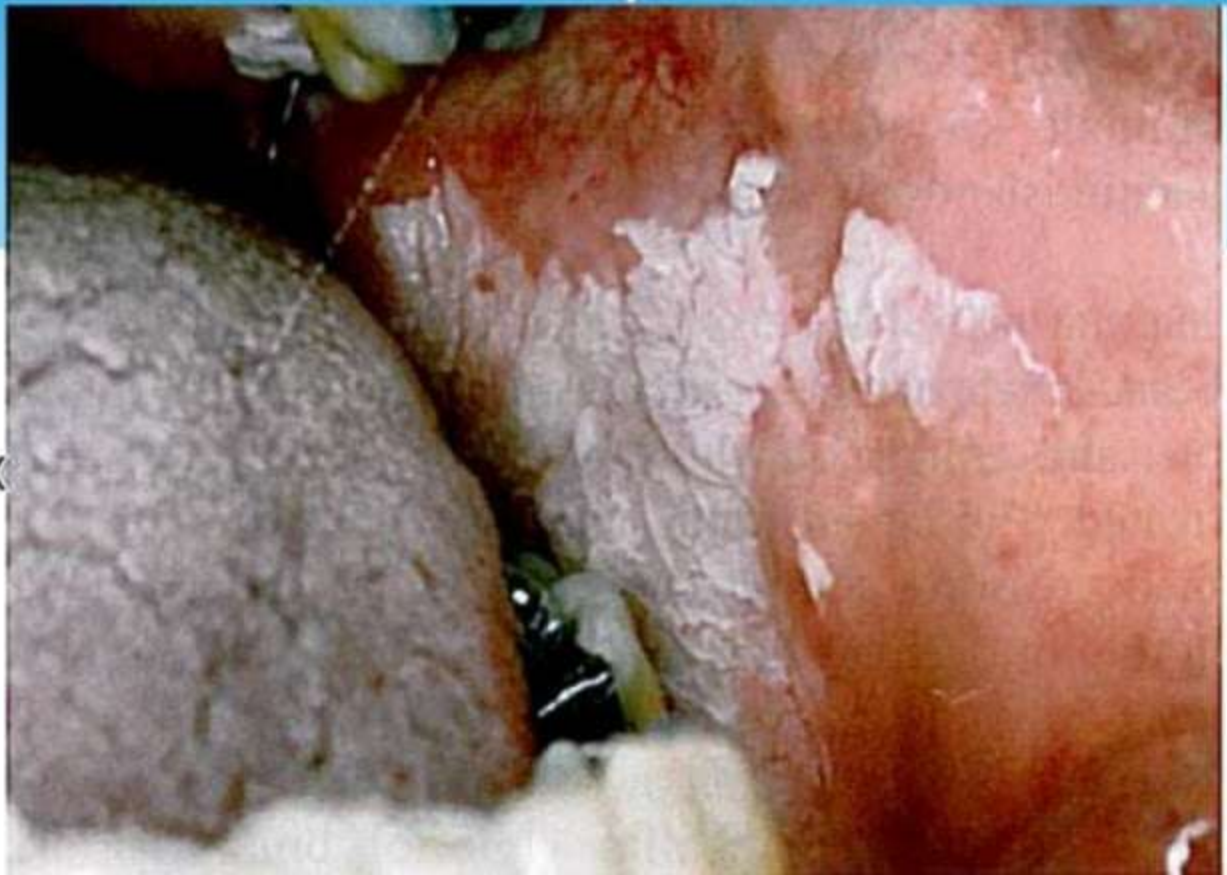
Leukoplakia. A whitish, well-defined mucosal patch or plaque caused by epidermal thickening or hyperkeratosis.

- **WHO.** Leukoplakia is a white patch or plaque that cannot be scraped off and cannot be characterized as any other disease.



Does NOT wipe off.

Leukoplakia



Age. The plaques are more frequent among **older men.**

Site. Most often on the vermilion border of the lower lip, buccal mucosa, the hard and soft palates, and less frequent on the floor of the mouth and other intraoral sites.

They appear as localized, sometimes multifocal or even diffuse, smooth or roughened, leathery, white, discrete areas of mucosal thickening.

Microscopy

Various forms:

1. hyperkeratosis without underlying epithelial dysplasia
2. mild dysplasia
3. severe dysplasia bordering on carcinoma in situ.

Only histologic evaluation distinguishes these lesions.

Risk factors

1. **Tobacco**
2. Chronic friction
3. **Alcohol**
4. HPV
5. Irritant foods

Risk factors cont.

6. Candida infection
7. HSV1
8. HHV6, HHV8
9. Oral sepsis
10. Vitamin deficiencies (A, B complex, Iron)
11. Idiopathic
12. Tertiary Syphilis

- 13.Galvanism
- 14. Actinic Radiation
- 15. Oral Submucous fibrosis
- 16. Tumor suppressor genens (p53, p Rb etc.).

Risk of malignancy

- Malignant transformation-- 3-25% (depending somewhat on location
- The transformation rate is greatest with lip and tongue lesions and lowest with those on the floor of the mouth.
- The more the dysplasia the greater the probability of cancerous transformation.

Differential Diagnosis

- **Hairy leukoplakia- AIDS,** corrugated surface, not related to oral cancer.
- **Verrucous leukoplakia-** corrugated, **recurs, spreads**...diffuse warty type, **harbor SCC**.
- **Erythroplakia**- red, velvety, often granular, circumscribed areas that may or may not be elevated, having poorly defined, irregular boundries. Marked epithelial dysplasia, malignant transformation is more than 50%.

Cancers of the oral cavity and tongue

- The most common cancers of oral cavity are **squamous cell carcinomas**. These cancers tend to occur **late in life** and rarely before the age of 40 years..

Clinical features

- Mostly **asymptomatic** so the lesion is ignored.
- May cause **local pain** and **difficulty in chewing**.
- As a result , a significant number are not discovered until beyond cure. About half result in death within 5 years and indeed may have already metastasized by the time the primary lesion is discovered

Prognosis

- **90**. At an early stage 5 year survival can exceed 90%.
- **40.**The overall 5 year survival rates after surgery and adjuvant radiation and chemotherapy are about 40% for cancers of the base of the tongue, pharynx, and floor of the mouth without lymph node metastasis,
- **20**.with less than 20% for those with lymph node metastasis.

Risk factors for oral cancer

Factor	Comments
1. Leukoplakia,erythroplakia	• Risk of transformation in leukoplakia is 3% to 25% • More than 50% risk in Erythroplakia.
2. Tobacco use	Best established influence particularly pipe smoking and smokeless tobacco.
3. HPV 16& 18	30-50 of cases
4. Alcohol abuse	Weaker influence than tobacco use, but the two habits interact to greatly increase risk
5. Protracted irritation	Weakly associated

Morphology

- **Predominant sites**:
- 1. Vermilion border of the lateral margins of the **lower lip**,
- 2. floor of the mouth, and
- 3. lateral borders of the mobile tongue.

Morphology cont.

- Early lesions appear as pearly white to gray, circumscribed thickenings of the mucosa closely resembling leukoplakic patches. They then may grow in an exophytic fashion to produce readily visible and palpable nodular and eventually fungating lesions, or they may assume an endophytic, invasive pattern with central necrosis to create a cancerous ulcer.

Morphology cont.

- The squamous cell carcinomas are usually **moderately to well differentiated keratinizing tumors.**
- Before the lesions become advanced it may be possible to identify epithelial atypia, dysplasia, or carcinoma in situ in the margins, suggesting origin from leukoplakia or erythroplakia.

Morphology cont.

- Spread to regional nodes is present at the time of initial diagnosis only rarely with lip cancer, in about 50% of cases of tongue cancer, and in more than 80% of those with cancer of the floor of the mouth. More remote spread to tissue or organs is less common than extensive regional spread.

Salivary gland tumors

- About **80%** of tumors occur within the **parotid** glands and most of the others in the submandibular glands.
- Males and females are affected about equally, usually in the sixth or seventh decade of life.
- **In the parotids 70% to 80% of these tumors are benign**.

List of Salivary gland tumors

- **Benign tumors:**
- Pleomorphic adenoma
- Warthin tumor
- **Malignant tumors:**
- Mucoepidermoid tumor

1. Pleomorphic adenoma. The dominant tumor arising in the parotids is

the benign **pleomorphic adenoma**, which is sometimes called a mixed tumor of salivary gland origin.

2. Warthin tumor. Much less frequent is the papillary cystadenoma lymphomatosum (**Warthin tumor**).

Collectively these two types account for three-fourth of parotid tumors. These tumors present clinically as a mass causing swelling at the angle of jaw.

- The most malignant tumor of the salivary gland is **mucoepidermoid carcinoma** which occurs mainly in parotids.
- When primary or recurrent **benign tumors** are present for many years (10-20), malignant transformation may occur, referred to then as a **malignant mixed salivary gland tumor**.
- Malignancy is less common in the parotid gland (15%) than in the submandibular glands (40%).

- Despite the tumor's encapsulation histological examination often reveals multiple sites where the tumor penetrates the capsule.
- Adequate margins of resections are thus necessary to prevent recurrences. This may require sacrifice of the facial nerve, which courses through the parotid gland.
- On average about 10% of excision are followed by recurrences.

Pleomorphic Adenoma (Mixed Tumor of Salivary Glands).

- This tumor accounts for **more than 90%** of benign tumors of the salivary glands.
- It is a slow-growing, well-demarcated, apparently encapsulated lesion rarely exceeding 6 cm in greatest dimension. Most often arising in the superficial parotid, it usually causes painless swelling at the angle of the jaw and can be readily palpated as a discrete mass. It is nonetheless present for years to before being brought to medical attention.

Morphology

- The characteristic histologic feature of PA is **heterogenity**. The tumor cells form ducts, acini, tubules, strands or sheets of cells. The epithelial cells are small and dark and range from cuboidal to spindle forms. These epithelial elements are intermingled with a loose, often myxoid connective tissue stroma sometime containing islands apparently cartilage or, rarely bone.

- **Immunohistochemical** evidence suggests that all of the diverse cell types within pleomorphic adenoma, including those within the stroma, are of **myoepithelial derivation**.


Thank You
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