

Introduction to oral pathology

Dr.Madhusudhan reddy

Introduction

- Oral and maxillofacial pathology is the specialty of dentistry and pathology which deals with the **nature**, **identification**, and **management of diseases** affecting the oral and maxillofacial regions. It is the science that investigates the **causes**, **processes** and **effects** of these diseases.

- Practice of oral and maxillofacial pathology includes **research**, **diagnosis** of diseases using **clinical**, **radiographic**, **microscopic**, **biochemical** or other examination and management of patients.

Classification of oral diseases

- According to the tissue affected
 - The different oral and maxillofacial diseases may affect different tissues which includes:
 - **Hard tissues** (calcified) like teeth, jaw bones and other bones in the maxillofacial regions
 - **Soft tissue** in the oral and para-oral regions

Classification of oral soft tissue lesions

1. Epithelial in origin:

1. Lesions originated from **odontogenic epithelium**
2. Lesions originated from **non odontogenic epithelium**
3. Lesions originated from **glandular epithelium**

2. **Mesenchymal** in origin

lesions originated from **fibrous tissue**

lesions originated from **blood** and **lymphatic vessels**

lesions originated from the **muscle**

lesions originated from the **nerve**

lesions originated from **adipose tissue**

lesions originated from the **bone**

lesions originated from the cartilage

Diagnosis of the oral and maxillofacial diseases

- **Depends on the type of tissue affected:**
- **Disease affecting the hard tissue, the diagnosis depend mainly on:**
 - **Clinical features which includes the age, gender, site, size and clinical effects.**
 - **Radiographic features**
 - **Microscopic features**

Diagnosis of soft tissue lesions

- **Clinical features.**
 - **Site**
 - **Morphology**
 - **Elevate-** above plain of mucosa
 - **Depressed-** below the plain of mucosa
 - **Flat-** with the plain of mucosa detected by the change in colour
 - **Color**
 - **size**
- **Microscopic features**

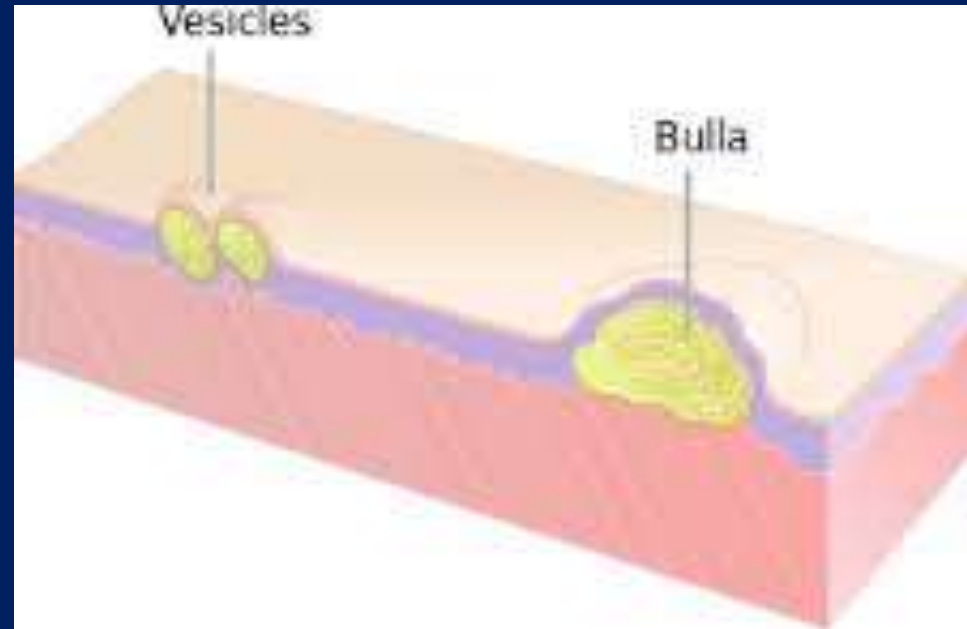
Elevated lesions

- **Blister form (containing fluid)**
 - **Vesicle: less than 5 mm**
 - **Bulla: more than 5mm**
 - **Pustule: filled with pus**
- **Non blisterform (not containing fluid)**
 - **Papule: less than 5mm**
 - **Nodule: more than 5mm and less than 2cm**
 - **Tumor: more than 2cm**

Blister form



Vesicle



Bulla

Blister form

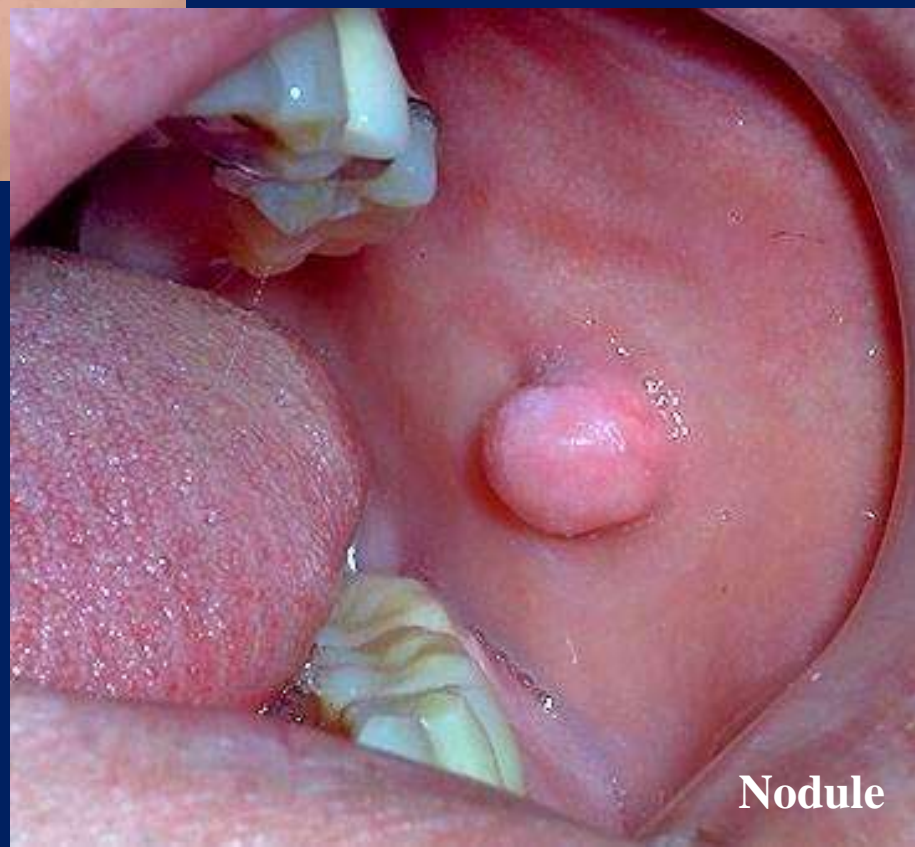


Pustule



Non blisterform

Papule



Nodule

Tumor



Non elevated lesion

- **Macule: flat with the plain of the mucosa. Detected by the change in the color**



Depressed lesions

- **Most are ulcers**



Intra bony lesions

- **Inflammatory**
- **Developmental**
- **Tumor**

Diagnostic Aids in Oral Pathology

- **Exfoliative cytology**
- **Vital dyes**
- **Tissue biopsy**



Exfoliative Cytology



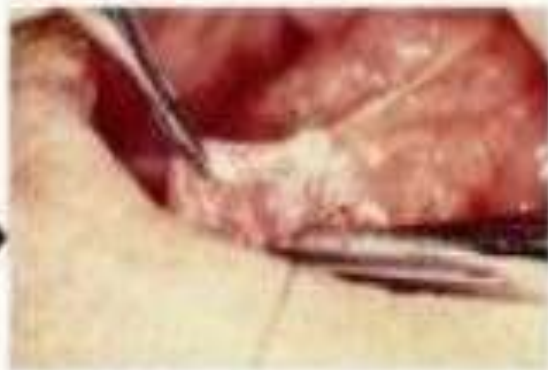
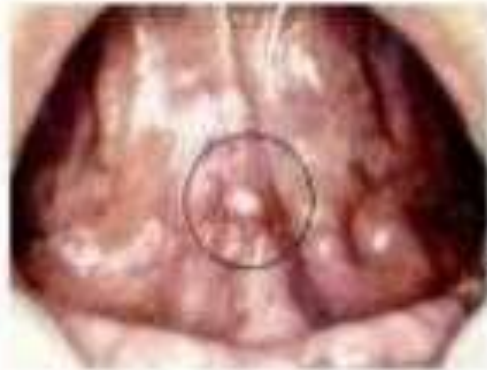
Toluidine Blue Staining



Tissue biopsy

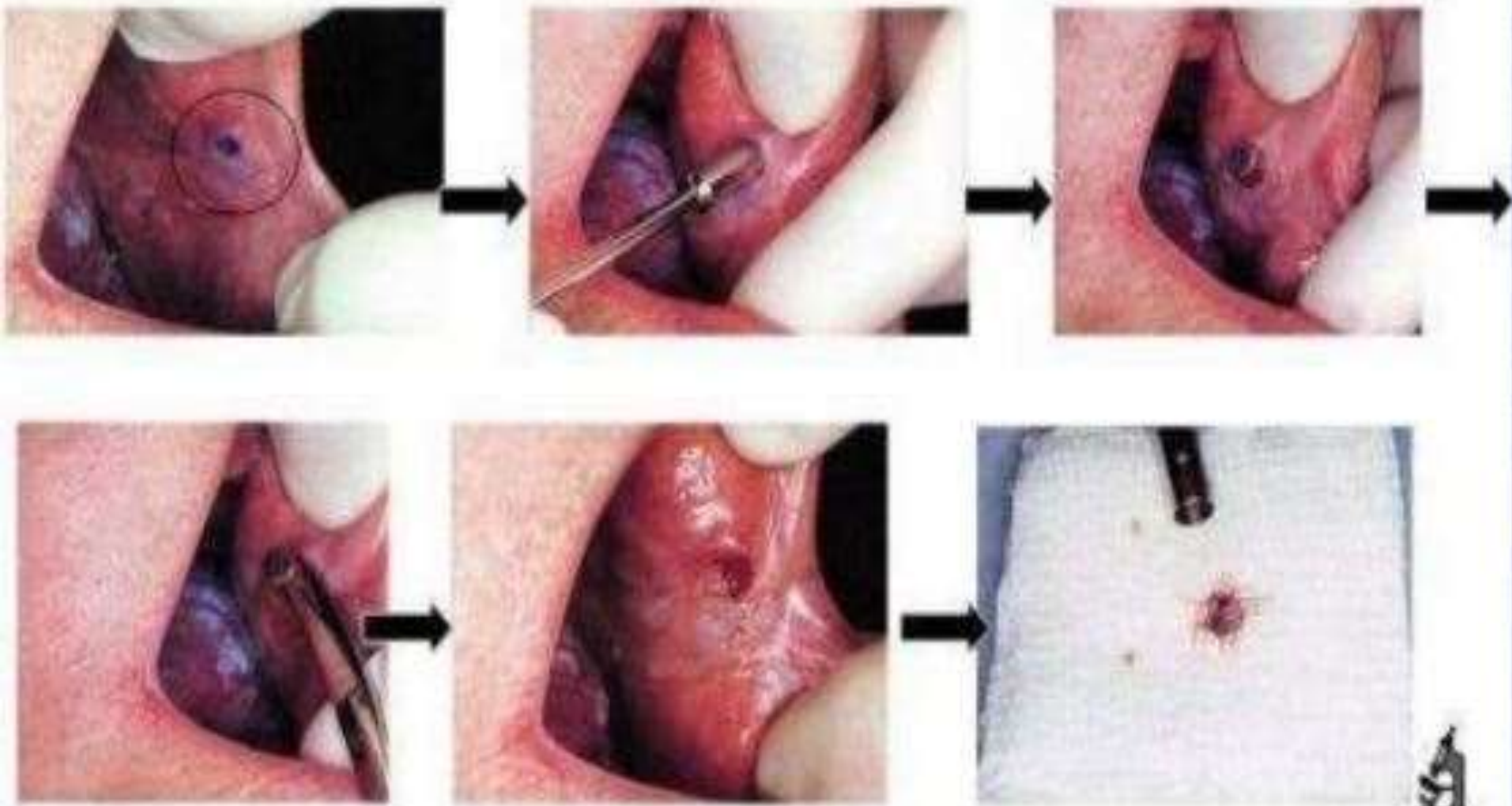
- **Surgical removal of the living tissue for microscopic examination**
 - **Indication**
 - **Types of oral biopsy**
 - **Excisional**
 - **Incisional**

Scalpel Tissue Biopsy





Tissue Punch Biopsy



histopathology

- **Microscopic examination of biopsy or surgical specimen by pathologist, after the specimen has been processed and histological sections have been placed onto glass slides.**

Tissue processing

- **Fixation:** in 10% neutral buffered formalin
- **Decalcification:** for hard tissue
- **Dehydration :** to remove water (nprogressive concentrations of ethanol are used)
- **Clearing:** xylene is used to remove alcohols
- **Infiltration:** paraffin wax is used
- **Embedding**
- **Sectioning staining**







Text books

- **Shafers** : text book of oral pathology : seventh or eight edition
- **Neville, Damm, Allen, Bouquot:** Oral and maxillofacial pathology text book: third edition