Sat 12 June 2010
Millennium WS 28 + 38
2.00-2.55; 3.05-4.00 PM

Rotorua GP CME 2010
General Practice Conference & Medical Exhibition

# Looking Beyond the Vermillion Border

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The University of Queensland

Johnson & Johnson



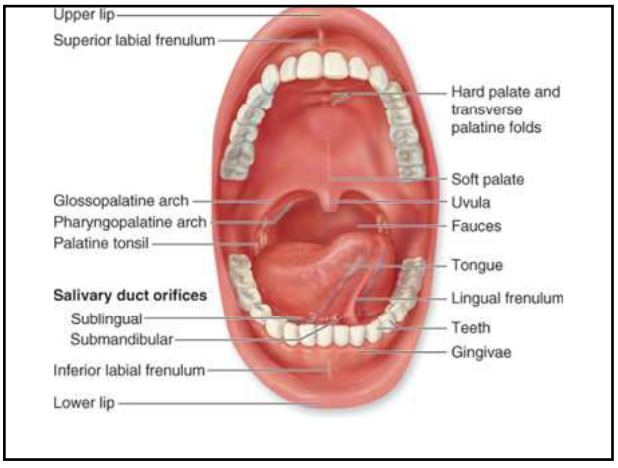
The University Of Queensland


## Diagnostic sieve

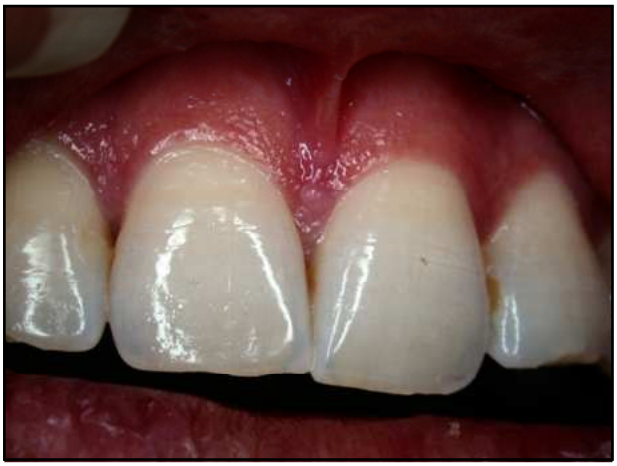
- **Infections**
  - Dental caries
  - Periapical infections
  - Periodontal diseases
  - Oral fungal infections
  - Oral malodour
- **Degenerative conditions**
  - Dental erosion
  - Accelerated tooth wear
  - Cervical dentinal hypersensitivity
- **Neoplasia**
  - SCC
  - Salivary gland lesions
  - Other oral cancers
- **Developmental conditions**
- **Inflammatory conditions**
  - Oral mucosal pathology
  - Oral ulcerative diseases
  - Auto-immune diseases
  - TMJ problems
  - Manifestations of systemic diseases
  - Medication-induced side effects

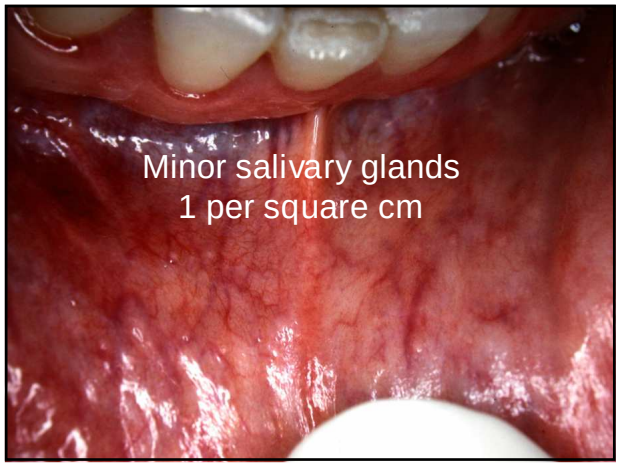
## Time bombs for medical GPs !

- Endodontic and periodontal abscesses
  - Sunset rule
  - Beta lactamase producing
- Irreversible pulpitis/ pulpal necrosis
  - Unstimulated toothache which keeps patient awake
  - Root filling or extract
- Endodontic pathology in oncology immune compromised patients
  - Fevers of unknown origin
- Mucormycosis or sinusitis
  - Symptom of maxillary toothache
- Untreated periodontitis and recurring fungal infections in diabetics
- Impaired nutrition
  - Third molars, pericoronitis and trismus
  - TMJ dysfunction
  - Primary or reactivated HSV infection intraorally
- Oral cancer
  - Lip, floor of mouth, tongue
- Maxillary anterior teeth
  - Dangerous triangle for cavernous sinus thrombosis
- Mandibular molar teeth
  - Ludwig's angina

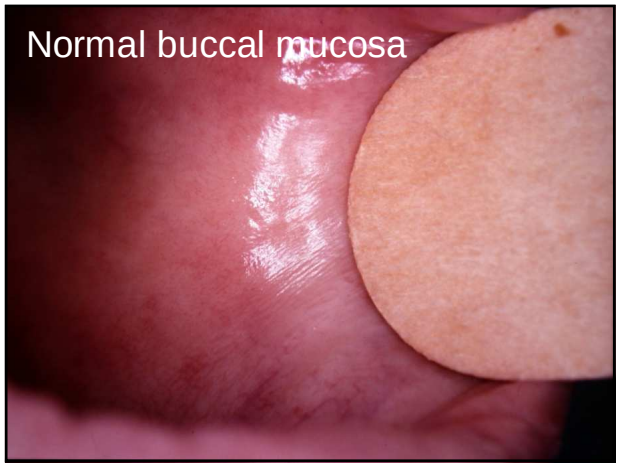




## Normal oral mucosa



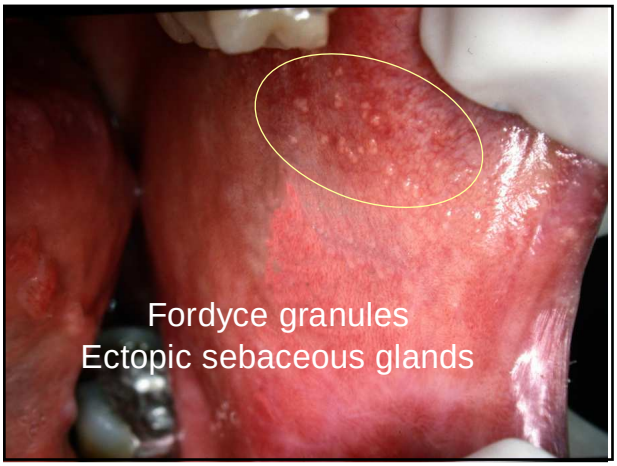

Minor salivary glands
1 per square cm

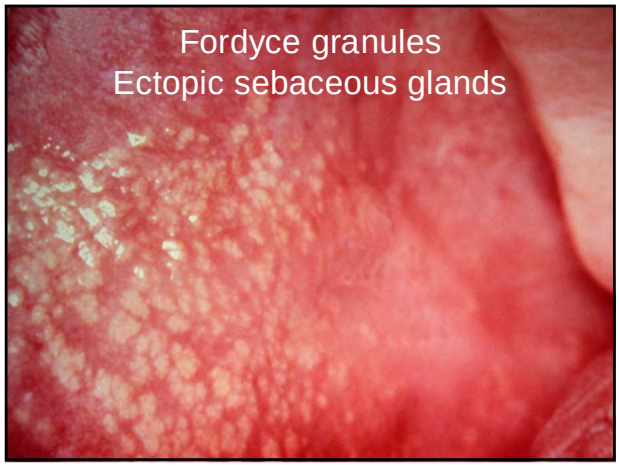

Normal floor of mouth
(should have watery saliva)

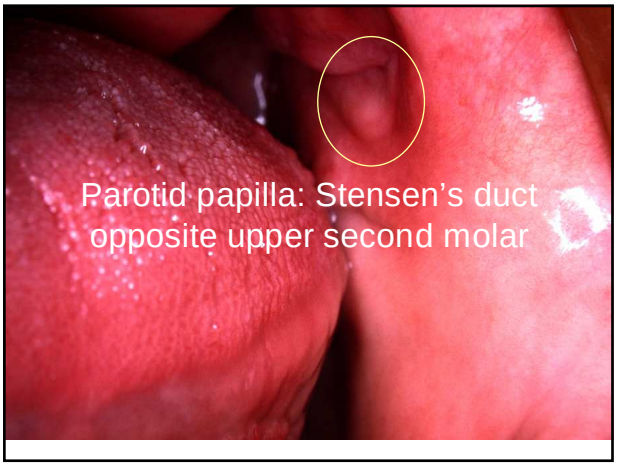

Normal buccal mucosa


Ethnic melanin pigmentation


Ethnic melanin pigmentation

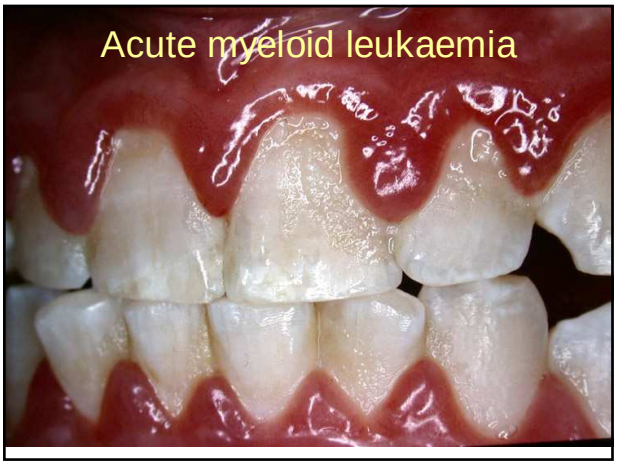


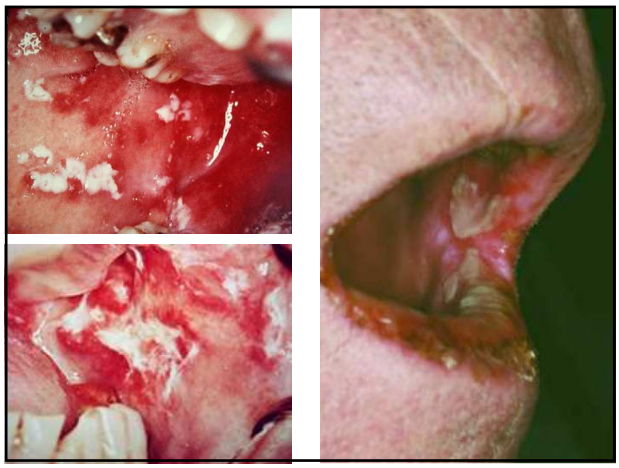

**Sinister lesions:**

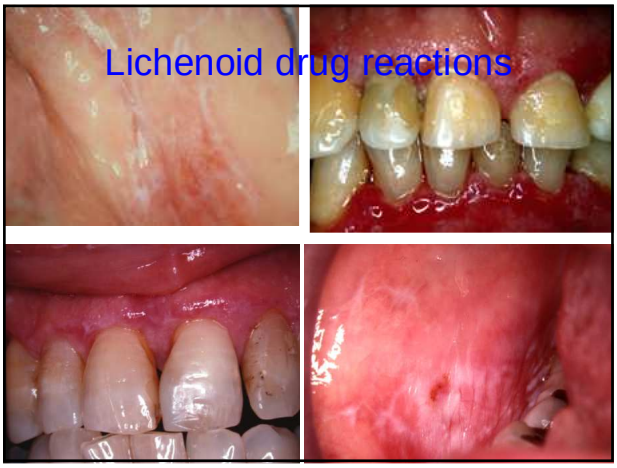
**Specialist dental referral**
**(Oral Medicine / Oral Surgery)**

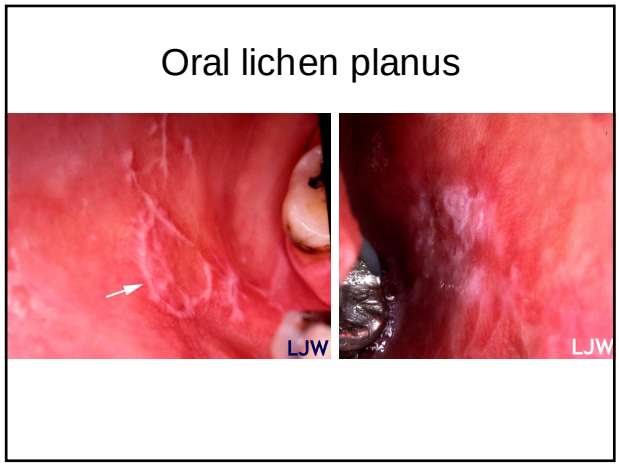


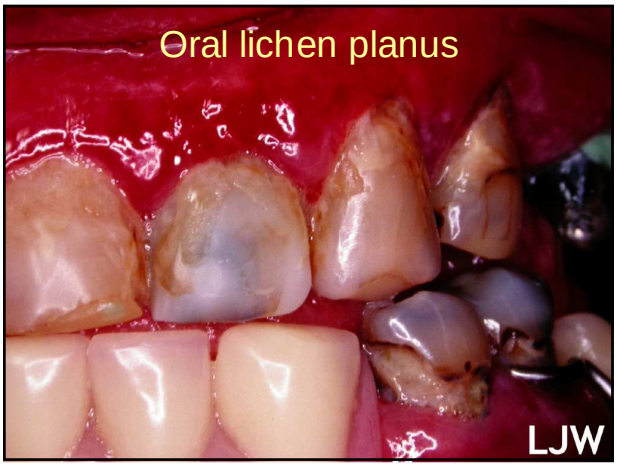


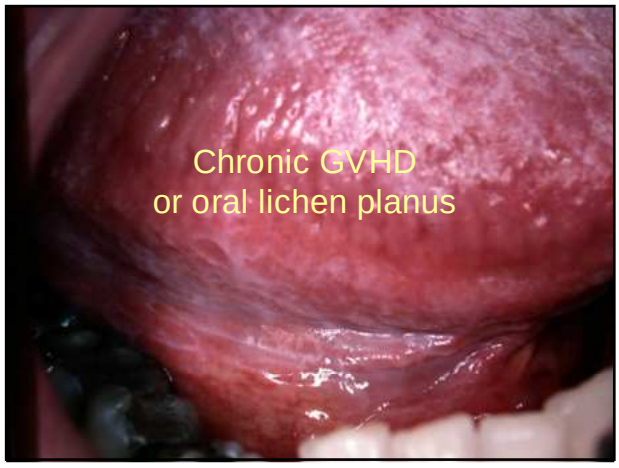
Mucositis from chemo/radiotherapy

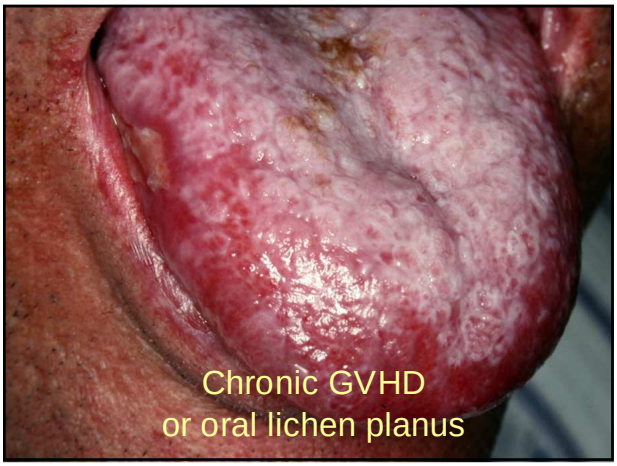



Lichenoid drug reactions

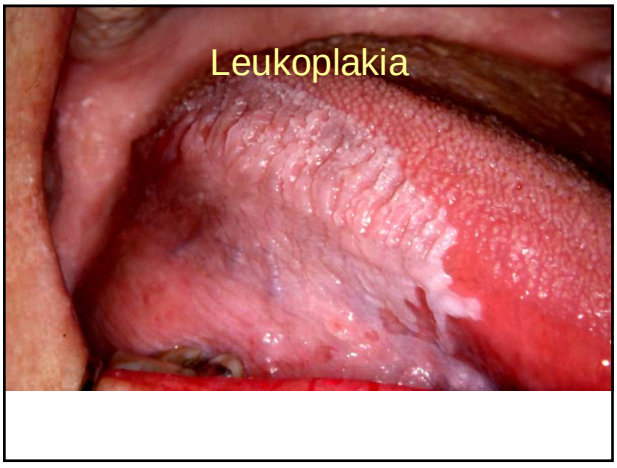

Oral lichen planus
LJW
LJW

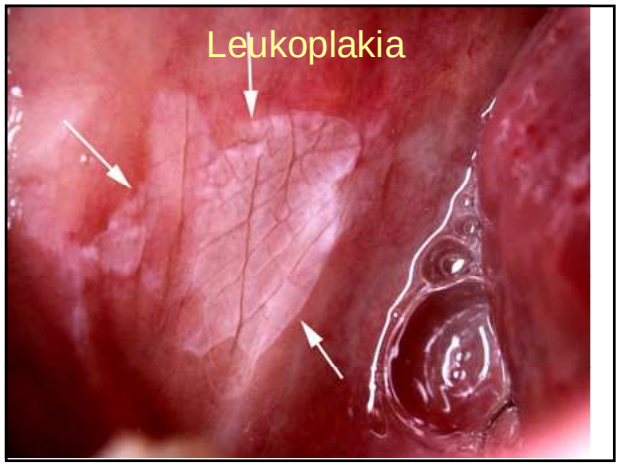

Oral lichen planus
LJW

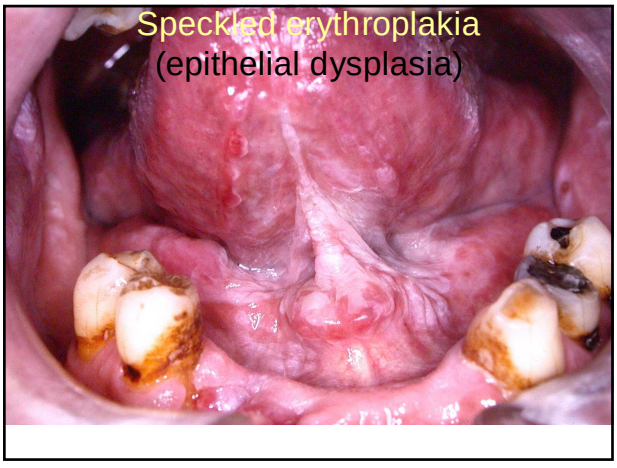

Chronic GVHD
or oral lichen planus

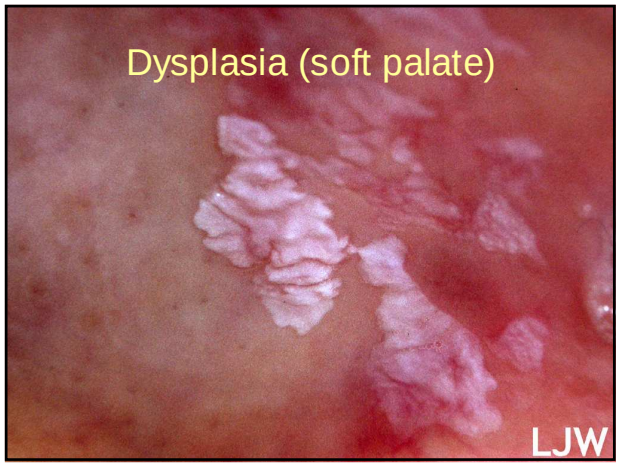

Chronic GVHD
or oral lichen planus


Smoker's keratosis

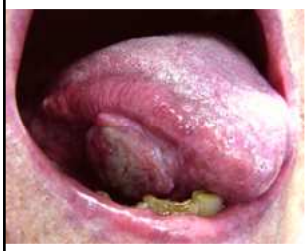
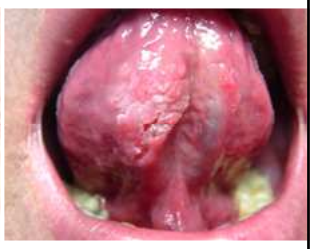

Leukoplakia


Leukoplakia

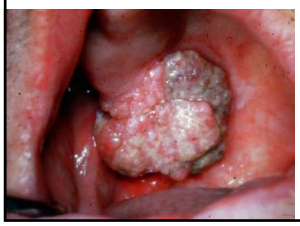
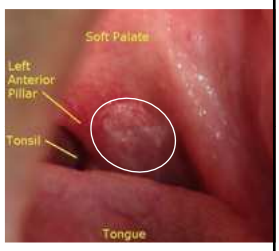

Speckled erythroplakia
(epithelial dysplasia)


Dysplasia (soft palate)
LJW

## Oral cancer

## Oral cancer

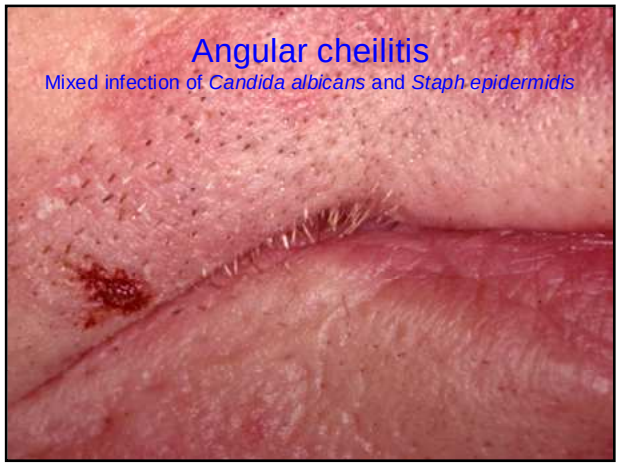





**Looking Beyond the Vermillion Border**

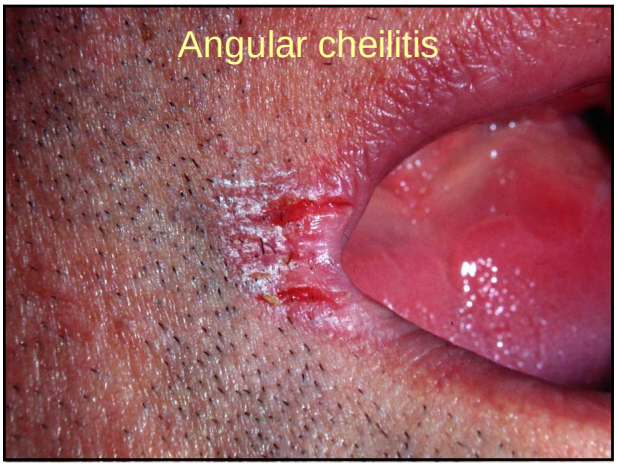
## Part 2 Infections

## Angular cheilitis

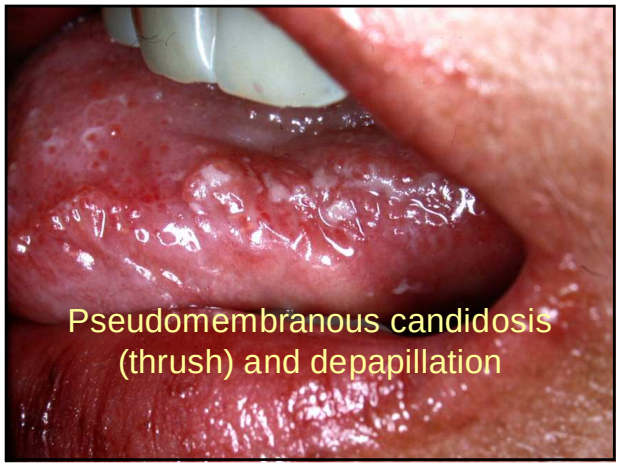
Mixed infection of *Candida albicans* and *Staph epidermidis*

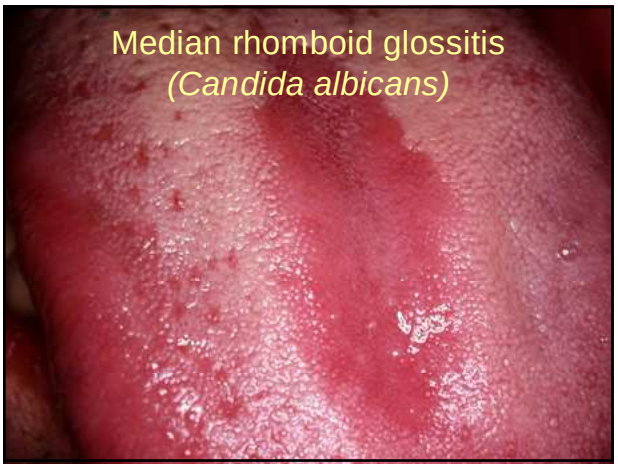


## Angular cheilitis

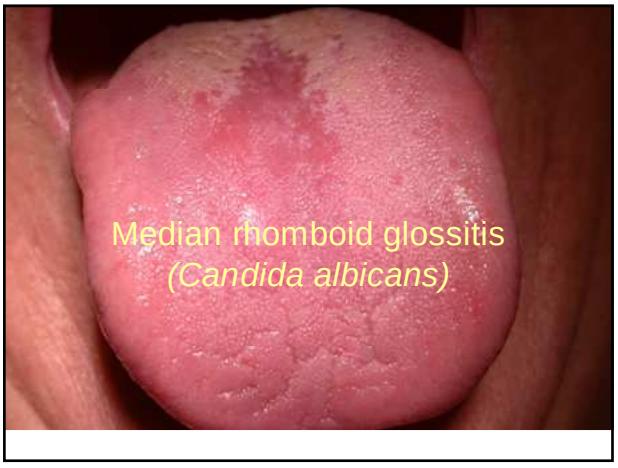


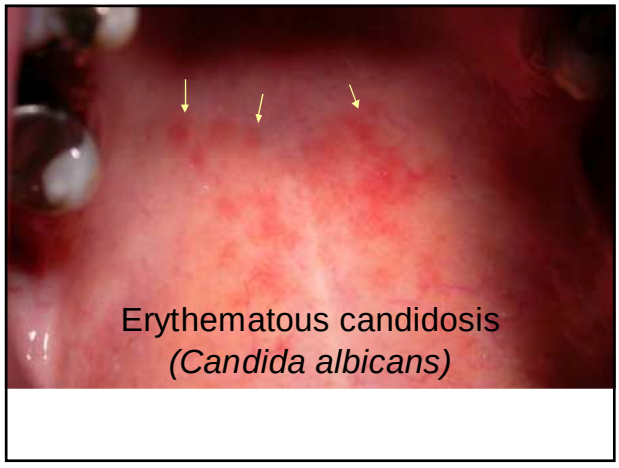
## Pseudomembranous candidosis (thrush) and depapillation

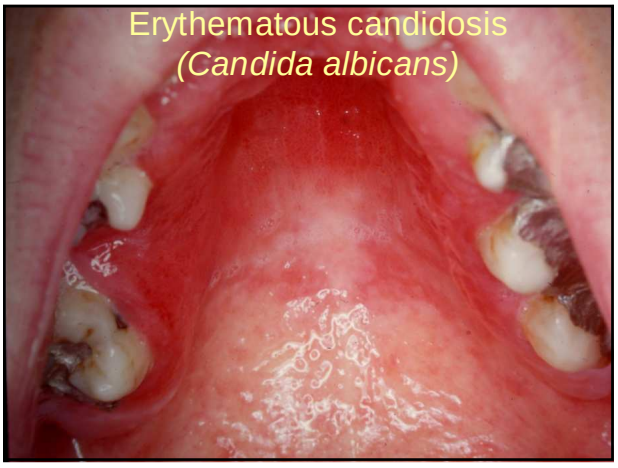


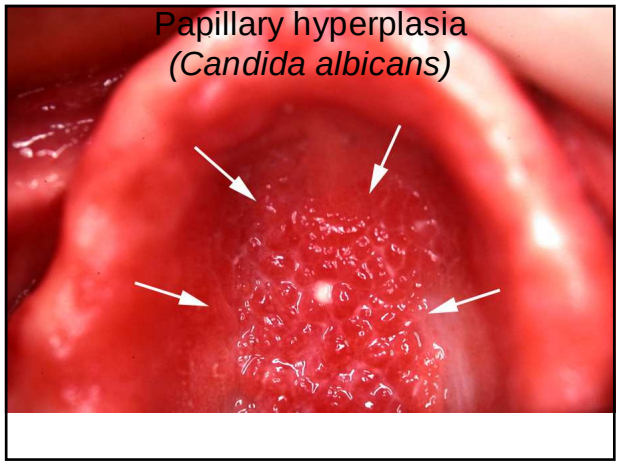

Median rhomboid glossitis
(Candida albicans)


Median rhomboid glossitis
(Candida albicans)

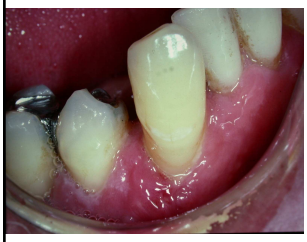
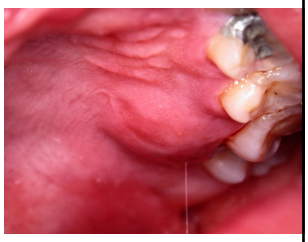

Median rhomboid glossitis
(Candida albicans)


Erythematous candidosis
(Candida albicans)

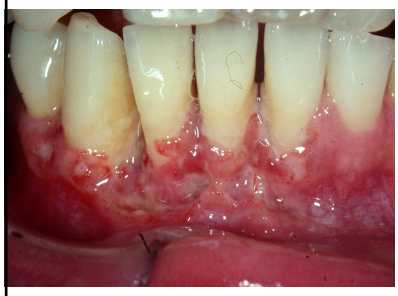
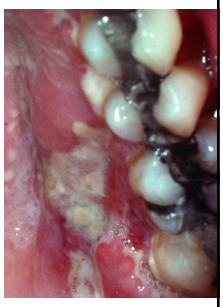

Erythematous candidosis
(Candida albicans)


Papillary hyperplasia
(Candida albicans)

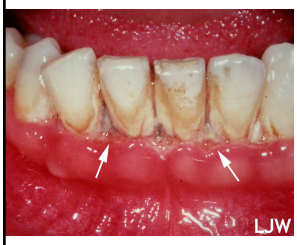
## Bacterial invasion: suppuration and periodontal abscesses

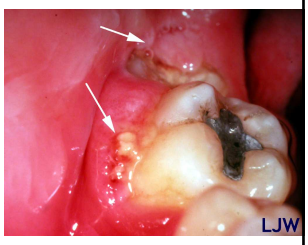
## Bacterial invasion: NUP (HIV-P)

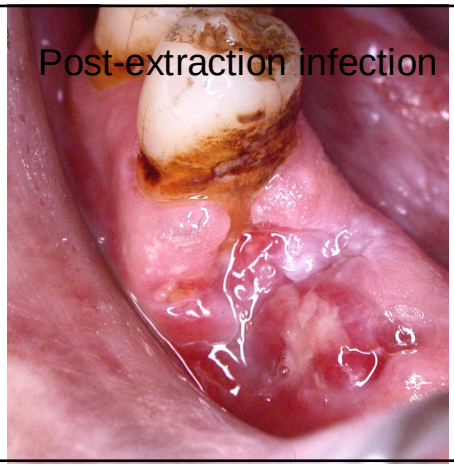
## ANUG

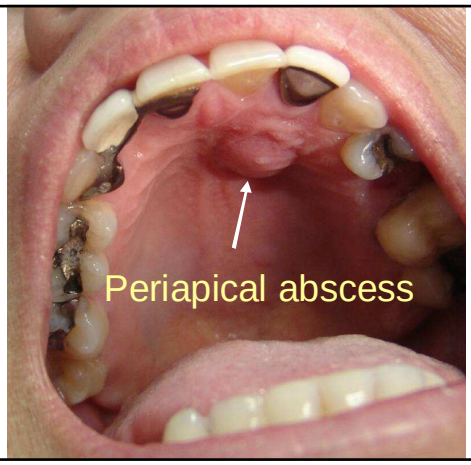



## Pericoronitis



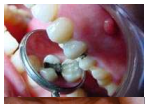
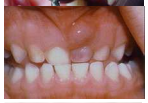

## Post-extraction infection

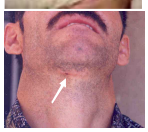





## Fate of localized infections

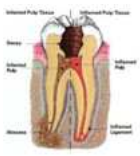
- Local spread through alveolar bone and soft tissues
  - Osteomyelitis (MX, MD)
  - Sinus tract on the skin
- Systemic mediator release
  - Total burden of infection
- Osteomyelitis (MX, MD)

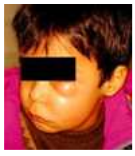



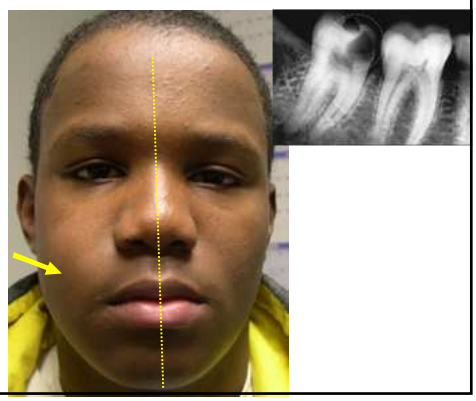
## Regional spread of dental infections

- A lymphadenitis can form a cellulitis, which can suppurate and become an abscess.
- Infections sources include **dental infections** as well as pharyngitis, tonsillitis, otitis, adenitis, adenoiditis, sinusitis, and nasal infections.
- Risk factors:
  - low socioeconomic status
  - poor oral hygiene
  - immune dysfunction (including HIV, diabetes, and immunosuppression)

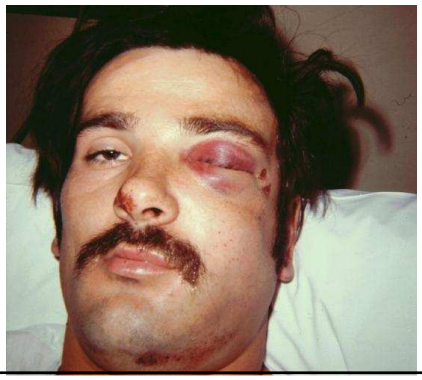




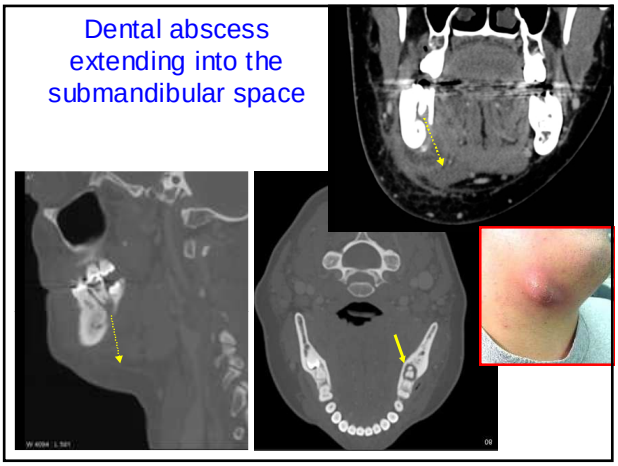
## Cellulitis



## Infected canine

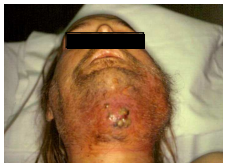


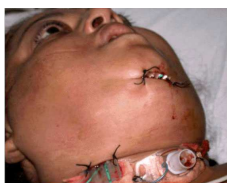
## Dental abscess extending into the submandibular space



## Ludwig's angina

- Serious, potentially life-threatening cellulitis infection of the tissues of the floor of the mouth
- Usually occurring in adults with concomitant dental infections
- Angina refers to the feeling of strangling (compromise of the airway)
- Tracheostomy often needed for airway support

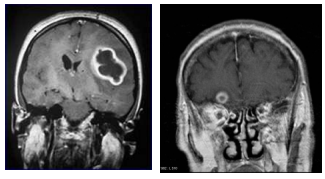




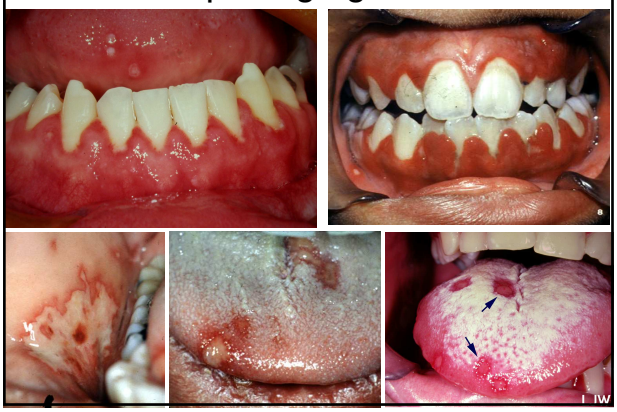
## Haematogenous spread to distant sites

- Spread by the bloodstream to distant sites in immune compromised patients
- Systemic sepsis and intravascular coagulation

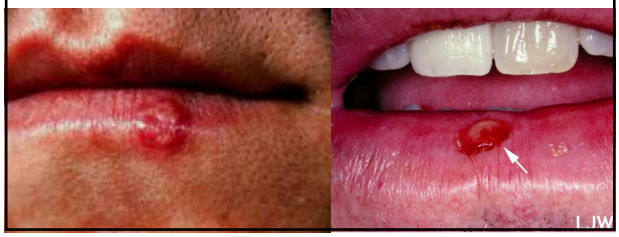
- Orbit
- Brain
- Liver
- Lung
- Spleen – abscess



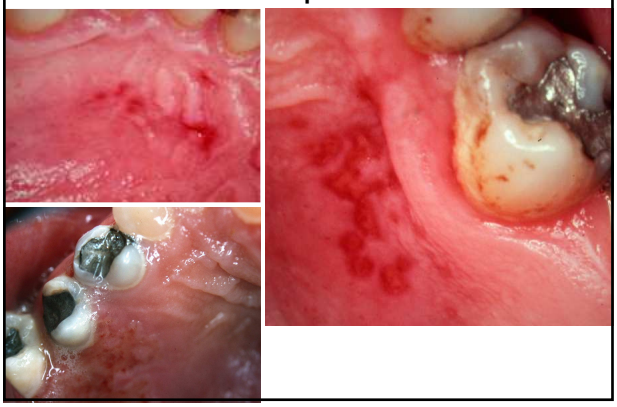
## Acute herpetic gingivostomatitis



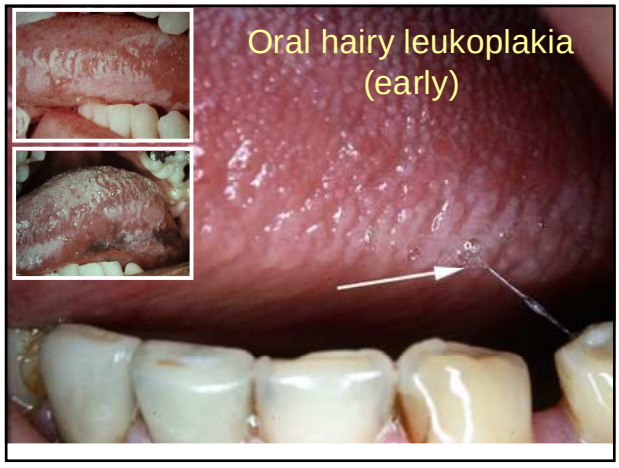
## Herpes labialis



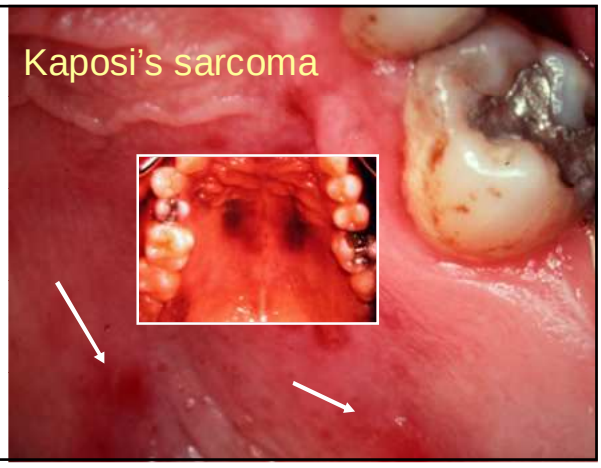
## Recurrent palatal HSV



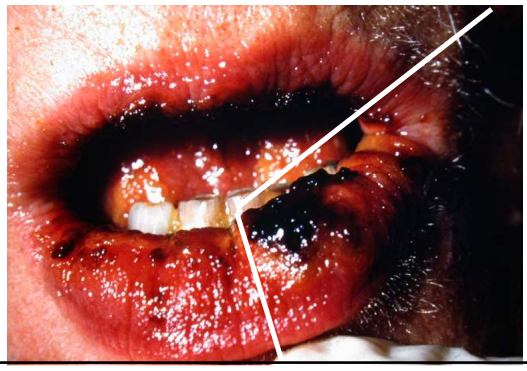
## Oral hairy leukoplakia (early)

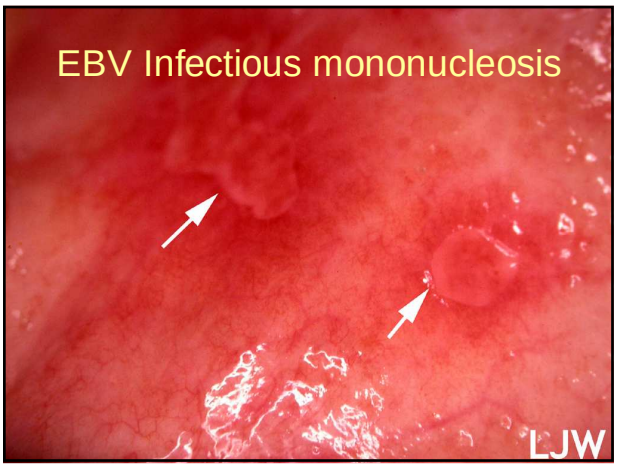


## Kaposi's sarcoma

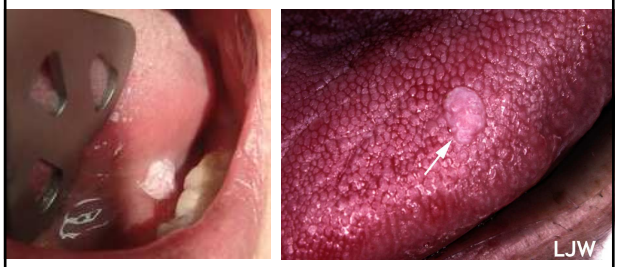


## Zoster affecting V3 (trigeminal)

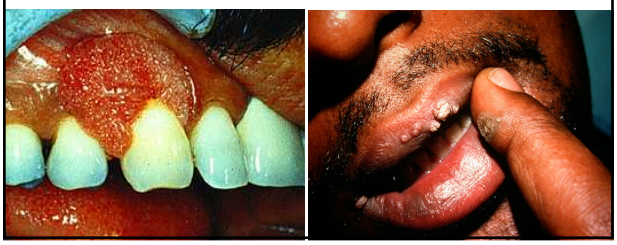




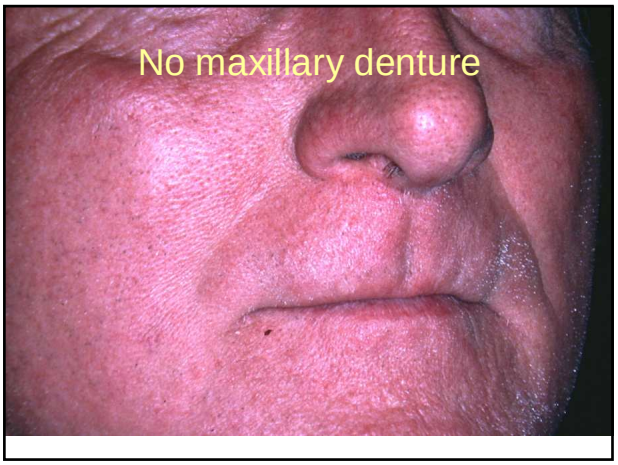

HPV Papilloma

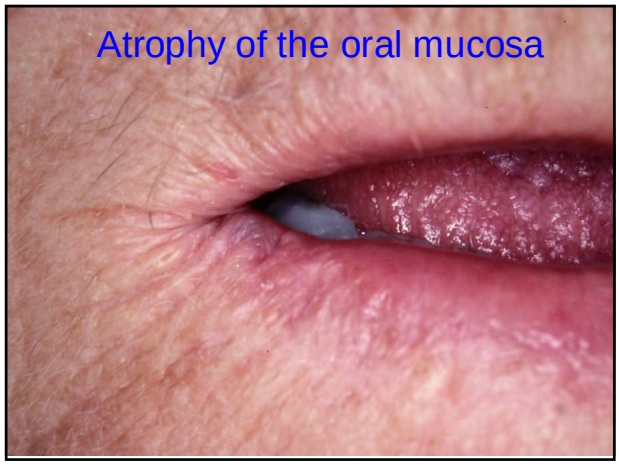


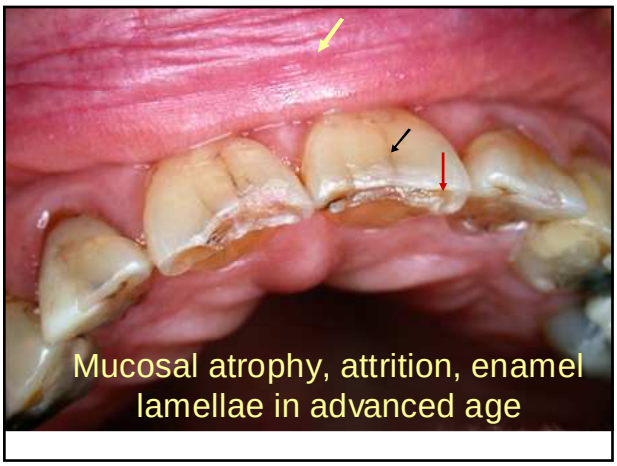

Condyloma accuminatum
(HPV multiple lesions)

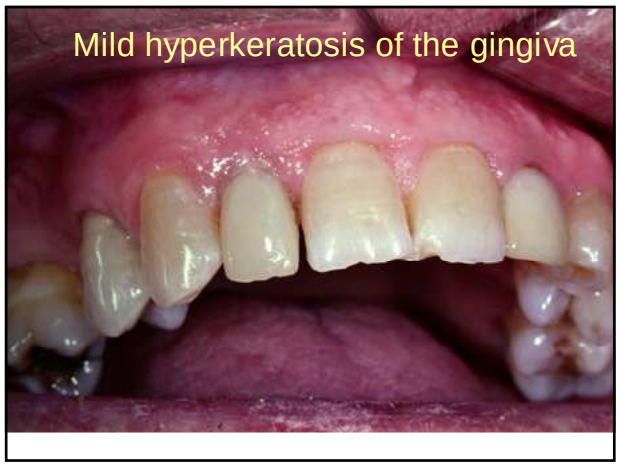


**Part 3**
**Common entities**

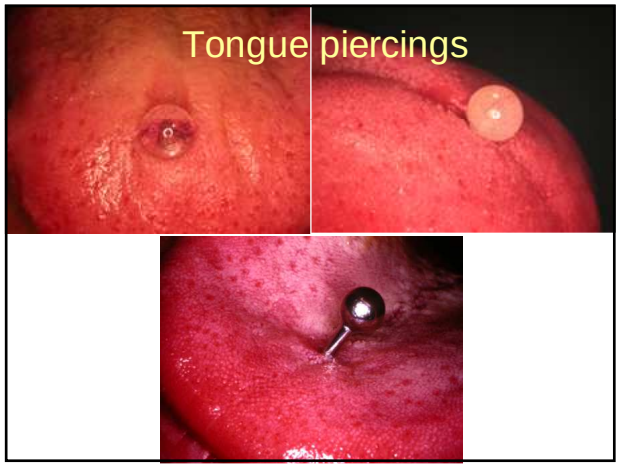


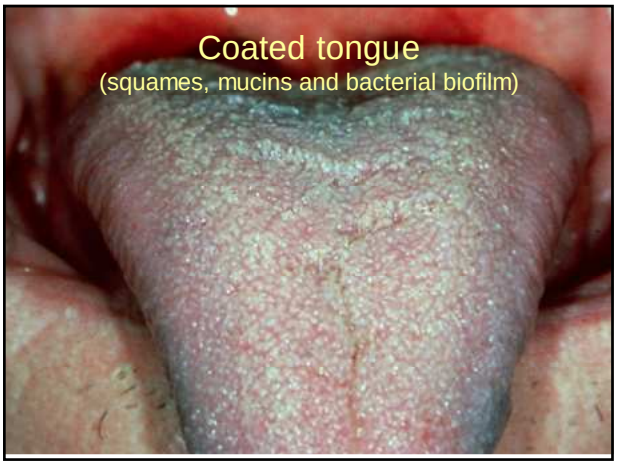



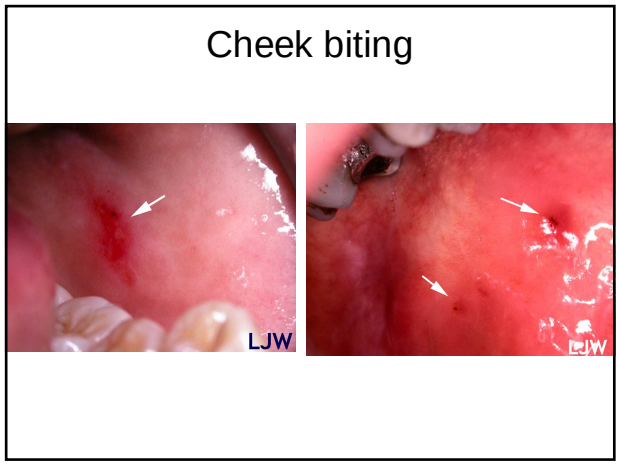

Mucosal atrophy, attrition, enamel lamellae in advanced age

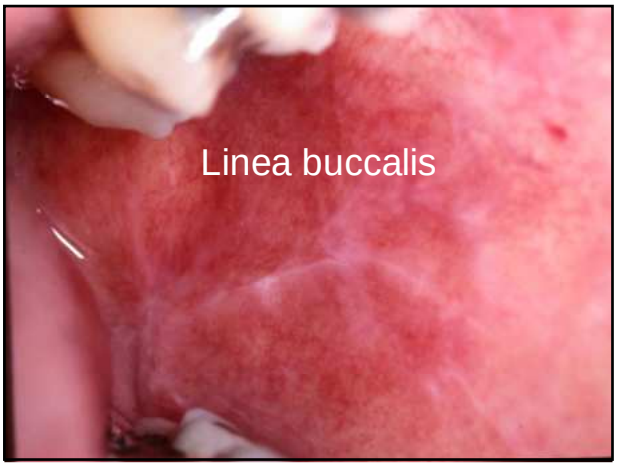

Mild hyperkeratosis of the gingiva

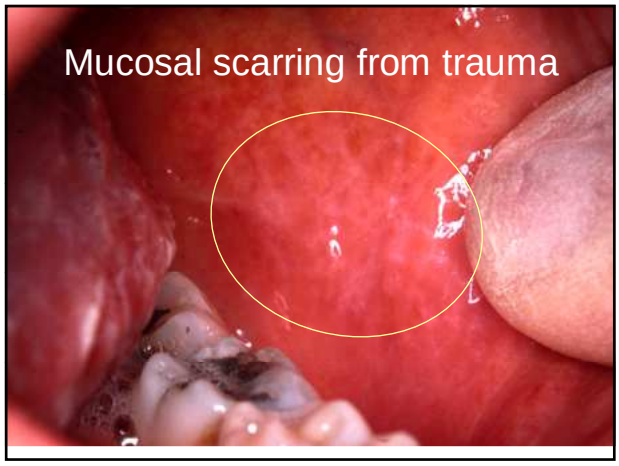

Extrinsic staining from smoking

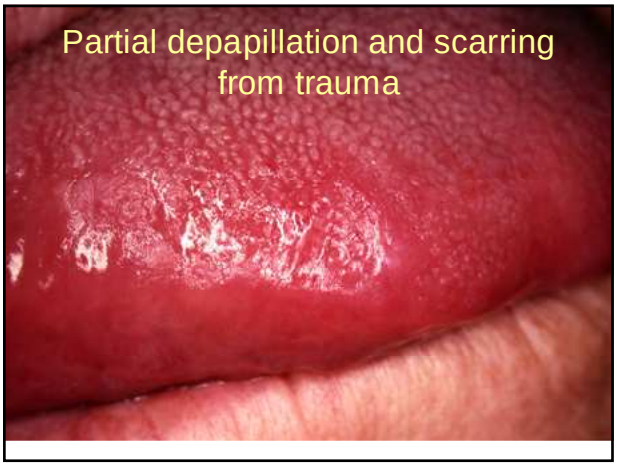

Tongue piercings


Coated tongue
(squames, mucins and bacterial biofilm)

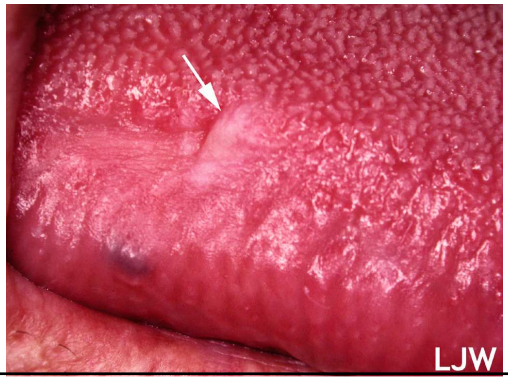

Cheek biting
LJW
LJW



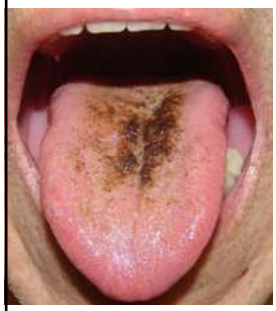



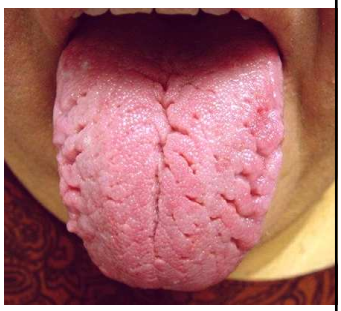

Scar from tongue biting



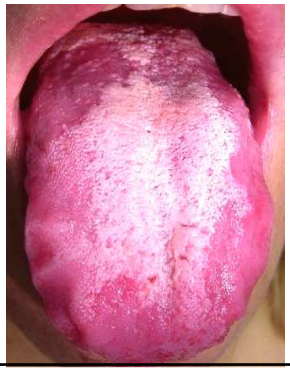


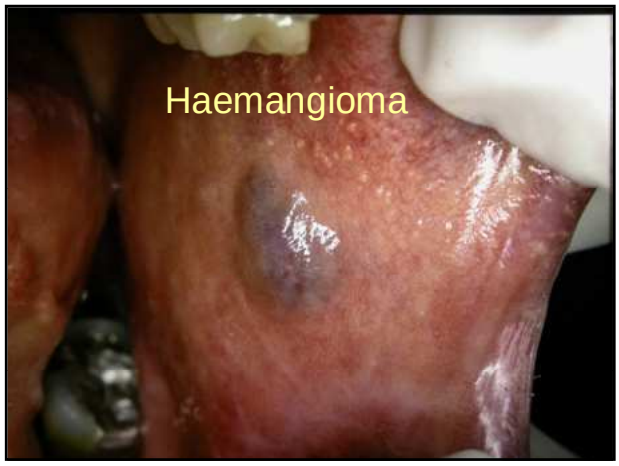
Hairy tongue Fissured tongue

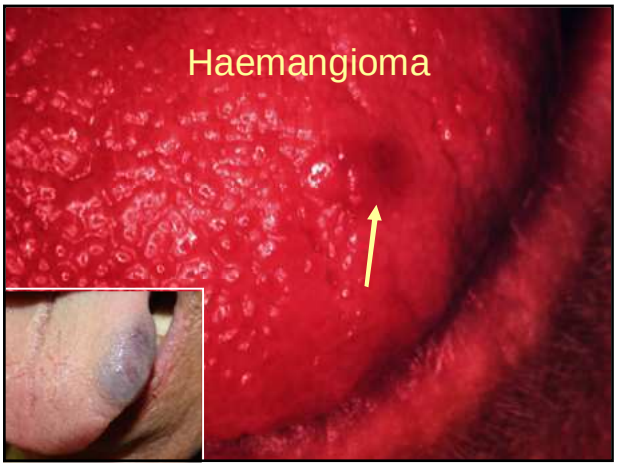


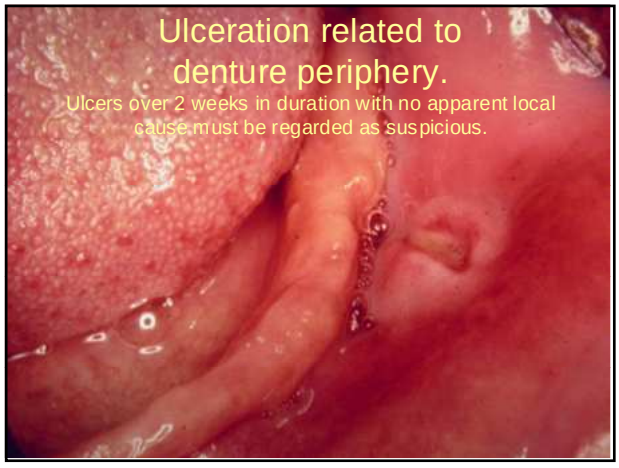


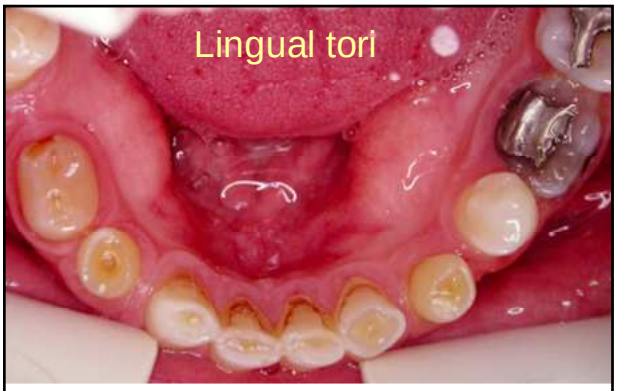
Geographic tongue



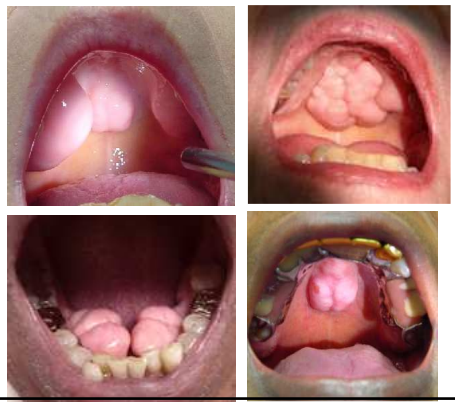


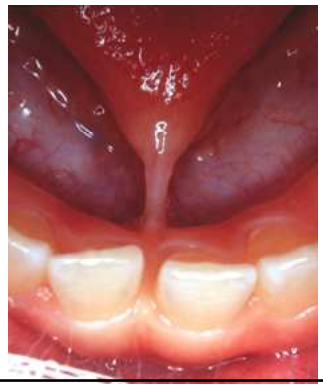

Tori

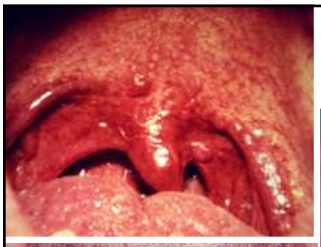


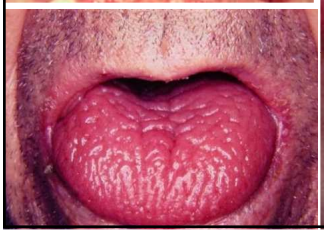
**Part 4**

**Common oral mucosal pathology**

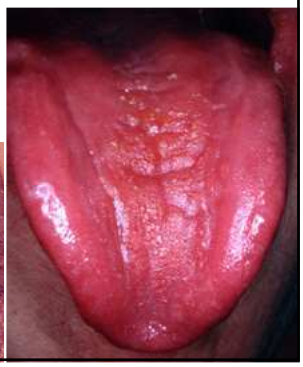
Tongue tie



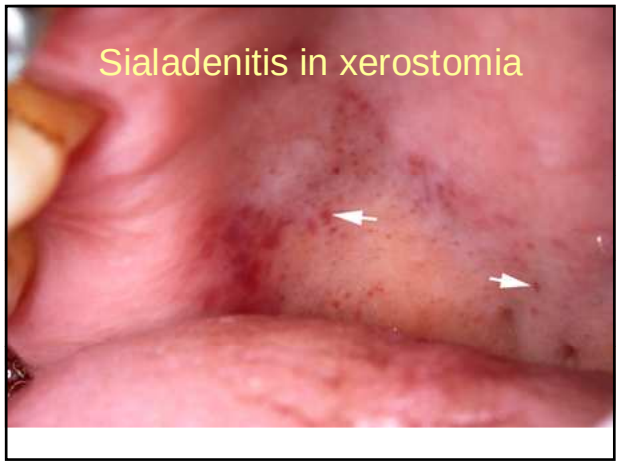


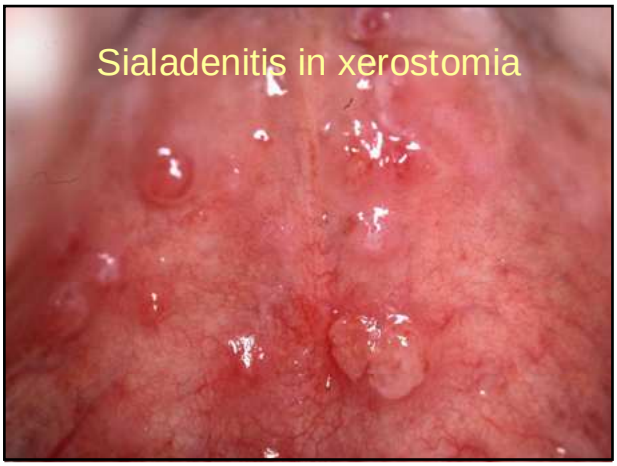


Xerostomia

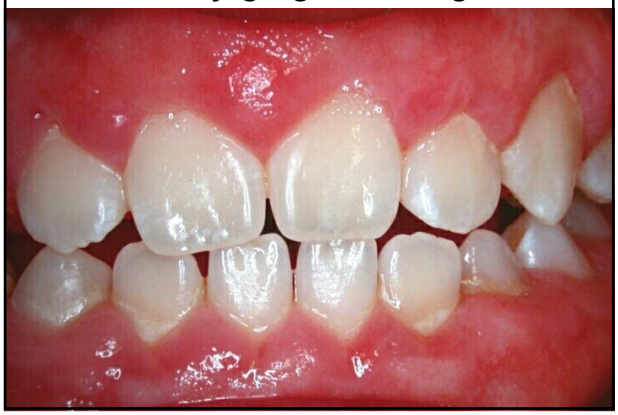






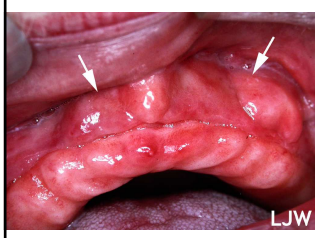


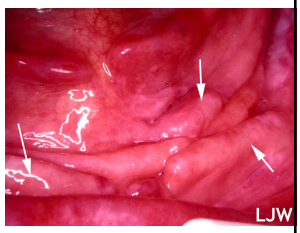

Hereditary gingival overgrowth

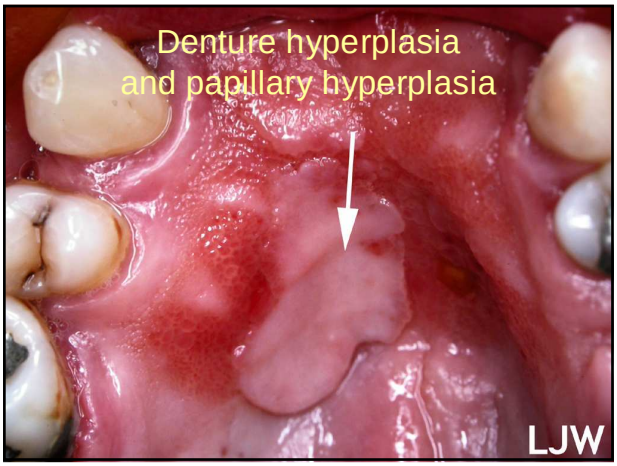


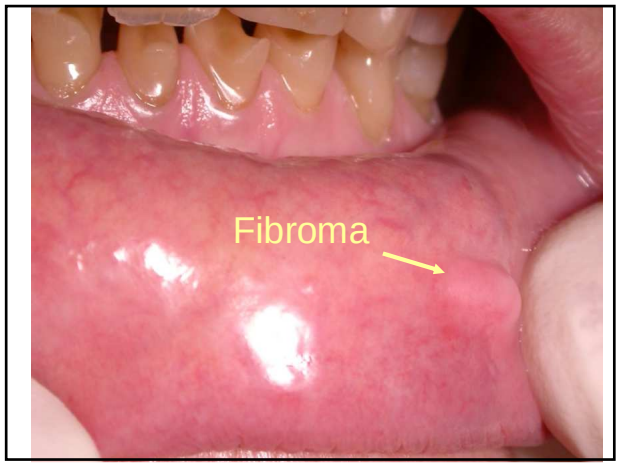



Denture hyperplasia

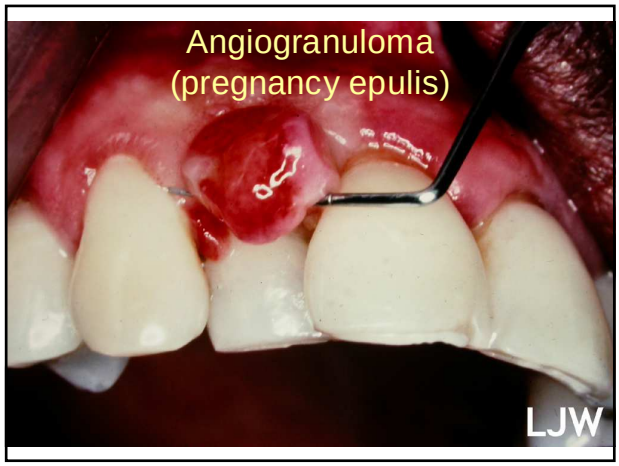


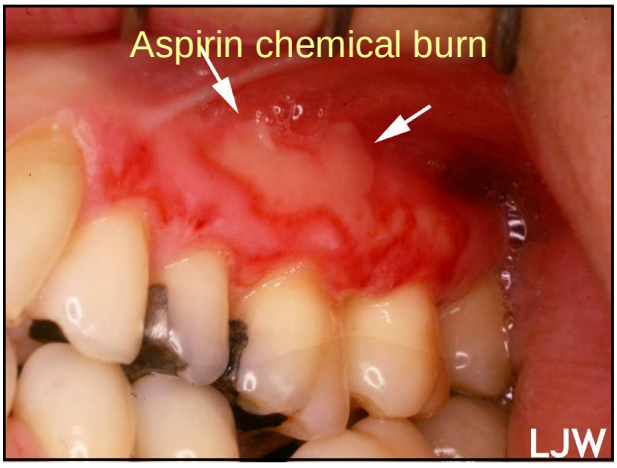



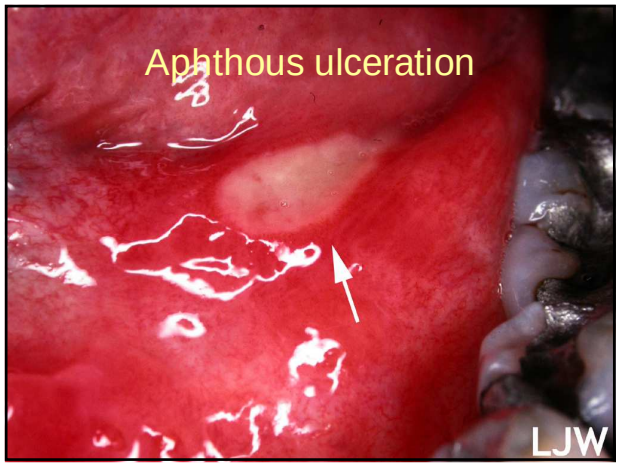

Denture hyperplasia
and papillary hyperplasia
LJW


Fibroma

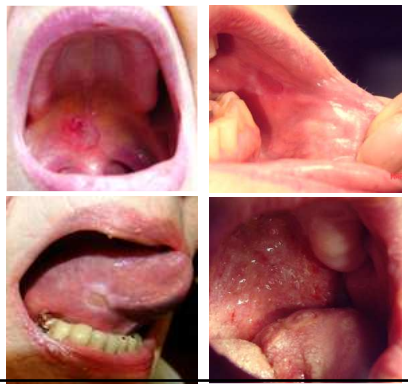

Fibroma
LJW
LJW


Angiogranuloma
(pregnancy epulis)
LJW


Aspirin chemical burn
LJW


Aphthous ulceration
LJW

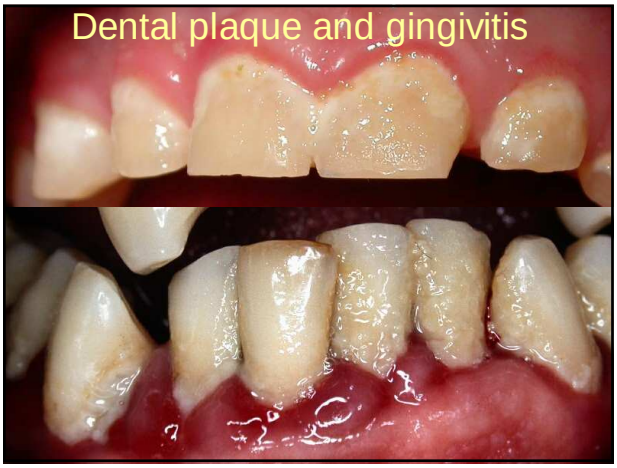
## Aphthous ulceration

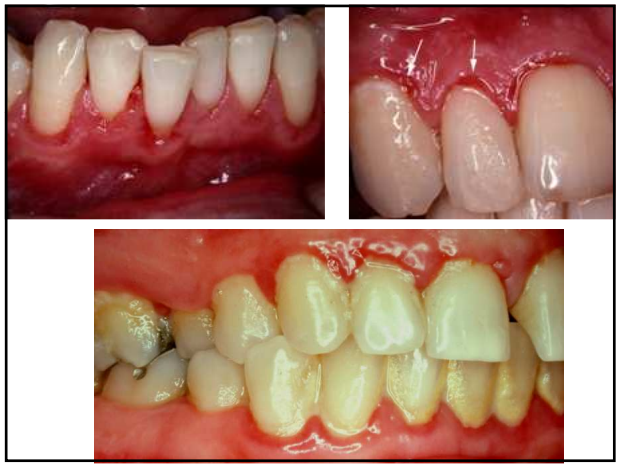


## Part 5

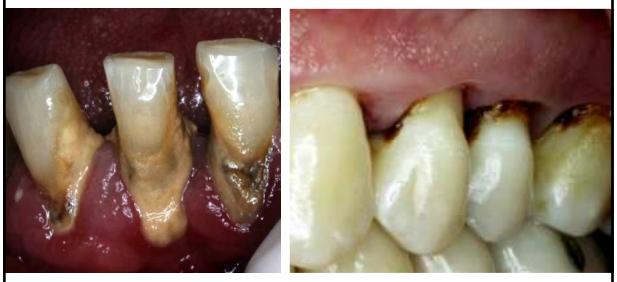
## Dental Caries and Periodontitis

## Dental plaque and gingivitis

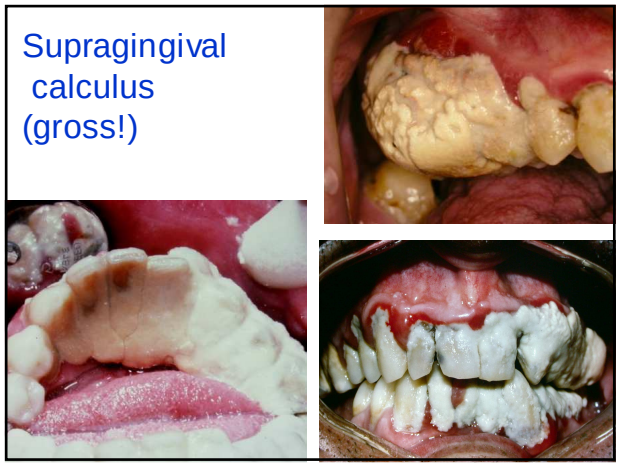




## Supragingival calculus



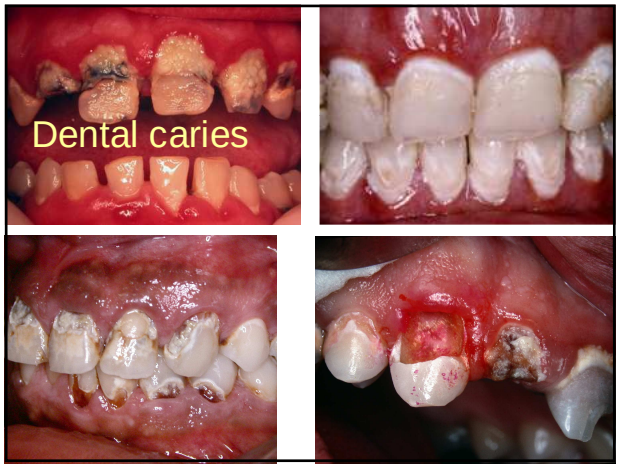
## Supragingival calculus (gross!)

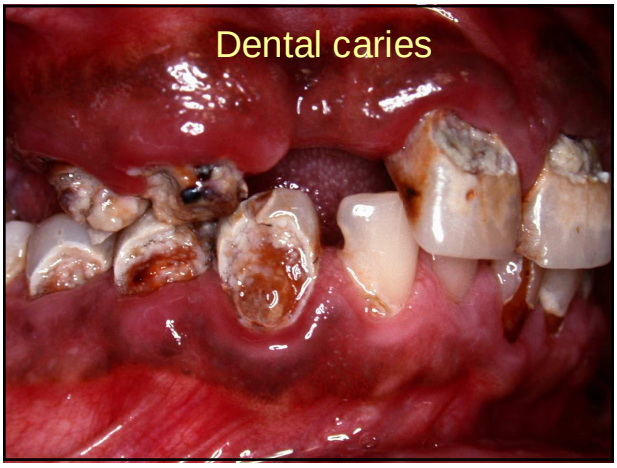



Recession


Recession

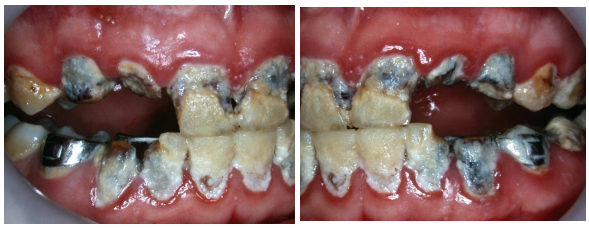

Chronic
periodontitis


Dental caries


Dental caries

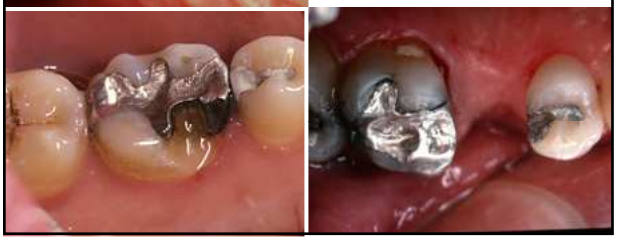

Caries from
illegal drugs

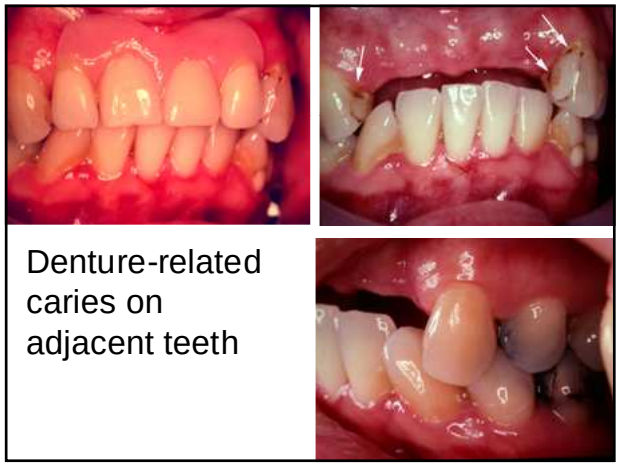
Sever caries “meth mouth”
Crystal Methamphetamine



**Decoronated teeth**

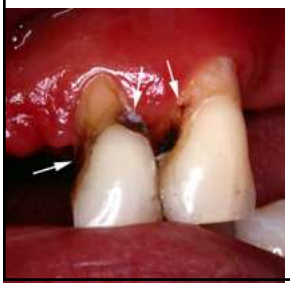
Heavily restored teeth and fractured cusps





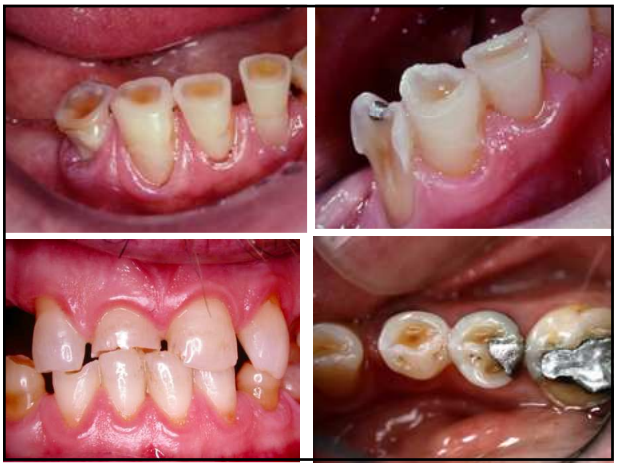
Denture-related caries on adjacent teeth

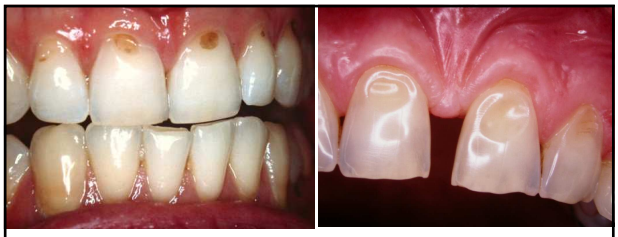
Root surface caries



**Part 6**

**Pathological tooth wear and dental erosion**





Dental erosion from subclinical dehydration

Dental erosion from chronic regurgitation/vomiting

Dental erosion