The diagnosis and management of common oral mucosal lesions and salivary gland disease

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Oral Medicine

2002 – BDS (QUB)

2011-2016 Specialty Training in Oral Medicine

2016 – Clinical Lecturer/Consultant in Oral Medicine

2026 – Clinical Reader/Consultant in Oral Medicine

- Associate Director for Year 1 and 2 BDS
- Clinical Lead for Oral Medicine – BHSCT
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- Secretary /President elect BISOM
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Oral Medicine

- “Specialty of dentistry concerned with the care of children and adults for the diagnosis of chronic, recurrent and medically related disorders of the mouth, face and jaws”.

- Interfaces between medicine and dentistry.

- Work principally in dental hospitals and university dental schools.

- In these settings, specialists in oral medicine work alongside other specialists in dentistry and in areas of adult and paediatric medicine.

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Learning outcomes

- By the end of this teaching session, you should be able to:-
- Recognise the clinical presentation of common mucosal and salivary gland disease
- Initiate treatment where appropriate
- Understand when to refer

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Topics to be covered

- Oral ulceration
- Swellings
- White patches
- Red patches
- Pigmentation
- Salivary gland disease

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Common mucosal conditions and their management – mouth ulcers

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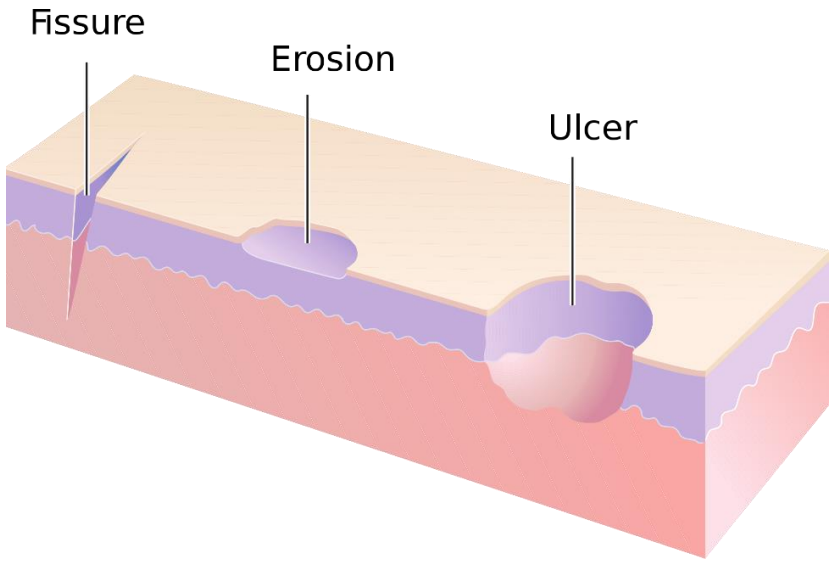
Mouth ulcers



- Fissure, deep groove, no loss of tissue
- Erosion is the term used for superficial breaches of the epithelium
- Ulcer is the term used where there is damage to epithelium and lamina propria

Classification of oral ulceration

Single

- Trauma
- Infective
- Drugs
- Neoplastic

Multiple

- RAS
- Systemic condition
- Drugs

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Key questions in an ulcer history

Number	How many ulcers do you get per episode?
Size	Pin head size, finger nail etc
Site	Where do they affect in mouth?
Frequency	How often you get them
Duration	How long does an ulcer last for?
Ulcer free periods	How long between episodes of oral ulceration
Extra-oral sites	Ulcers anywhere else
Pain	How painful and do they affect daily activities
Additional symptoms	Prodromal symptoms

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Key questions in an ulcer history

Habits	Clenching, grinding, tongue thrusting
Associations/onset	Foodstuffs, hormonal, stresses
Impact of ulceration	Affects on day to day activities, time off work/school
Family history	Other family members with oral ulceration, history of Coeliac disease/IBD or other serious illness in family
Medical history	Enquire about any related systemic systems, especially focusing on any gastro-intestinal signs, e.g. abdominal pain, weight loss, blood or mucus in the stools, altered bowel habit, nocturnal defecation
Treatments	Enquire about prescribed medication, anything bought 'Over The Counter' (OTC) or abroad as ‘ulcer remedies’. Check compliance and correct usage technique to any medication tried so far

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Traumatic ulceration

- Common
- Present acutely
- Variable duration
- Usually single

- ? Discomfort
- Not site specific
- Systemic upset unusual

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Traumatic ulceration

- Variable size and margins
- Fibrinous base
- Induration
- Keratotic halo

Recurrent aphthous ulceration

- Recurrent round painful ulcers with associated erythema
- Begin in childhood, improve with age
- No association with systemic disease
- 25-60% of the population

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Recurrent aphthous ulceration

- F>M
- May be preceded by prodromal symptoms
- Three distinct clinical presentations

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Recurrent aphthous ulceration - minor

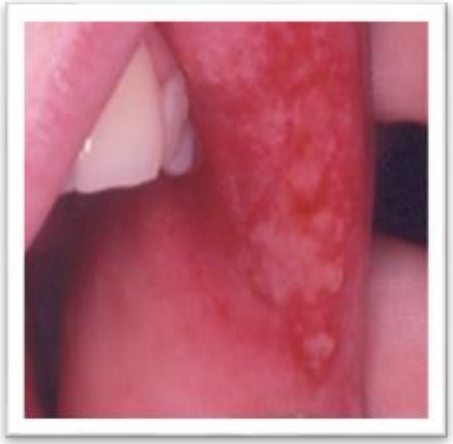
- Starts in childhood
- Multiple ulcers
- Oval/round with fibrinous base
- Non-keratinised mucosa
- Heal within 7-10 days
- Recur

Recurrent aphthous ulceration - major

- Uncommon
- Large
- Persist for weeks
- 1-5 ulcers
- Affect keratinised and non-keratinised mucosa
- Painful and heal with scarring

Recurrent aphthous ulceration - herpetiform

- Uncommon
- Variable size
- Multiple ulcers which coalesce
- Affect keratinised and non-keratinised mucosa
- Heal within 14 days without scarring



Oral ulceration secondary to Infectious disease:- Viruses

- Herpes group of viruses
- Primary herpetic gingivostomatitis
- Herpes labialis

Recurrent intra-oral herpes

- HSV-1, VZV
- Prodromal symptoms, such as tingling or burning
- Vesicle formation – ragged ulcers – erythema
- Painful

Recurrent oral ulceration

- Patients with recurrent oral ulceration on a background of systemic disease

- The aetiology and pathogenesis is directly linked to the underlying medical disorder

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Crohn’s disease

- Immunological disorder
- Lip/facial swelling
- Erythema and linear ulceration within buccal sulci (posteriorly)
- Ulceration/scarring of buccal mucosa
- Buccal mucosa cobble stoning, swelling, mucosal tags, stag horning

Gastrointestinal disorders

- Coeliac disease
- Dental enamel hyperplasia, pitting, grooving, partial loss of enamel
- Delayed tooth eruption
- One fifth of cases aphthous-like ulceration initial presentation

Ulcerative colitis

- Pyostomatitis vegetans (PV)
- Multiple white or yellow pustules coalescing to produce linear or ‘snail-track’ like ulcers
- Labial gingiva and the buccal mucosa
- Rare, ulcerative colitis

O'Gorman C, Smyth S, Willis A. Unusual presentation of pyostomatitis vegetans and its management *BMJ Case Reports CP* 2023;**16:**e256318

Mucous membrane pemphigoid

- Tense bullae or vesicles, which may present as blood blisters
- Rupture within 24 hours to produce irregular areas of erosion



Pemphigus vulgaris

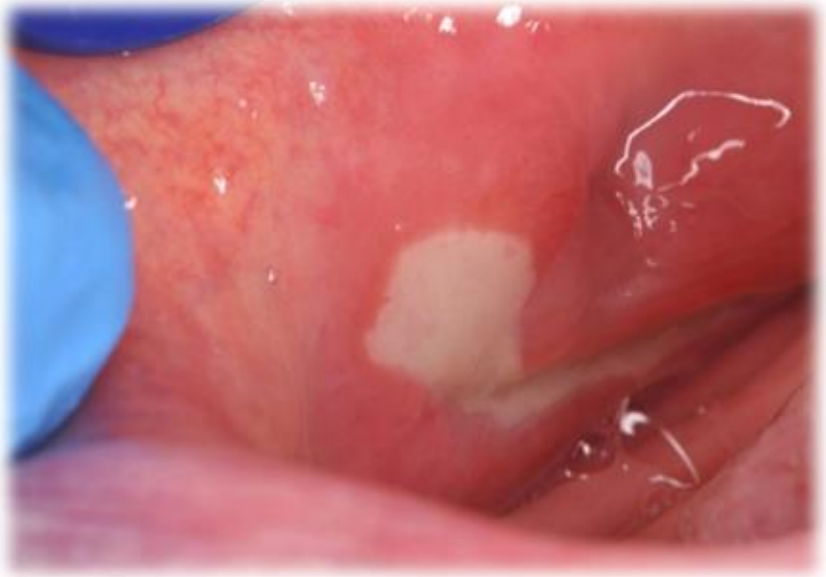
- Fragile bulla
- Painful superficial ragged erosions
- Palate, lingual and buccal mucosa
- Non-specific clinical appearance of the oral lesions
- Diagnosis is almost entirely dependent on biopsy and direct immunofluorescence

Erythema Multiforme

- Widespread irregular painful shallow oral ulceration with mucosal sloughing and haemorrhage
- Lips, tongue and palate as symmetrical painful erosions or ulcerations
- Lips swollen, ulcerated and blood (serosanguinous exudate)
- When the skin is involved, typical ‘‘target’’ lesions may be seen

Drug induced ulceration

- Multiple drugs
- Usually, single ulcers
- Tongue
- Variable shape
- Pseudomembranous slough
- No induration
- Painful



Management

- Diagnosing and treating the underlying cause
- Removing aetiological factors
- Symptomatic relief
- Treatments are often not curative
- Review

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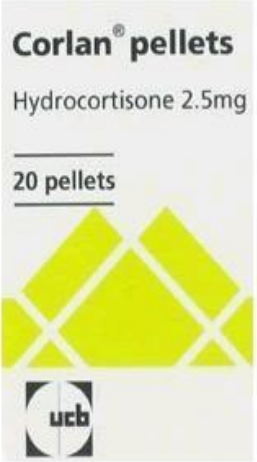
First line therapy

- SLS- free toothpaste
- Topical analgesics
  - 0.15% Benzydamine hydrochloride
  - 1% Lidocaine ointment
- Topical antimicrobials:
  - Chlorhexidine digluconate mouthwash
  - Dispersible doxycycline (100mg) as a mouthwash TDS

First line therapy

- Topical corticosteroids:
  - 2.5mg Hydrocortisone muco-adhesive buccal tablets
  - 0.5mg soluble betamethasone phosphate tablets diluted in 10mls of water as a mouthwash OD-QDS
  - Beclomethasone dipropionate aerosol (50mcg)



Splint therapy

- Soft mouth guard
- Self induced trauma
- Mechanical protection

When to refer?

- Single ulcers persisting for three or more weeks
- Speckling
- Induration
- Uncertain aetiology
- Significant impact on quality of life
- Recalcitrant ulceration

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Common mucosal conditions and their management - swellings

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Fibroepithelial polyp

- Single
- Sessile or pedunculated
- Painless swelling
- Labial mucosa, tongue, buccal mucosa
- Normal/keratotic epithelium
- Trauma
- Surgical excision

Squamous papilloma

- HPV
- Small, single, granular surface appearance
- Labial mucosa, soft and hard palate, uvula, lingual fraenum
- Surgical removal

Denture induced hyperplasia

- Leaf fibroma
- Diagnosis
  - Clinical appearance
- Management
  - Excision
  - New denture

Exostosis

- Firm swellings
- Normal overlying epithelium
- Torus palatinus - 20-35%
- Torus mandibularis – 10%
- Ulceration

Pyogenic granuloma

- Granulation tissue in response to stimulus
- Gingival margin
- Nodular, red lesions
- Ulcerated, bleed on touch
- Radiograph
- Excisional biopsy

Lipoma

- Smooth surfaced swelling
- Capsulated, moveable
- Yellow discolouration
- ? Surgical removal

Sialolith

- Calcified mass
- Submandibular gland
- Prandial symptoms
- Radiographs
- Bask retrieval v surgical excision

Common mucosal conditions and their management – white patches

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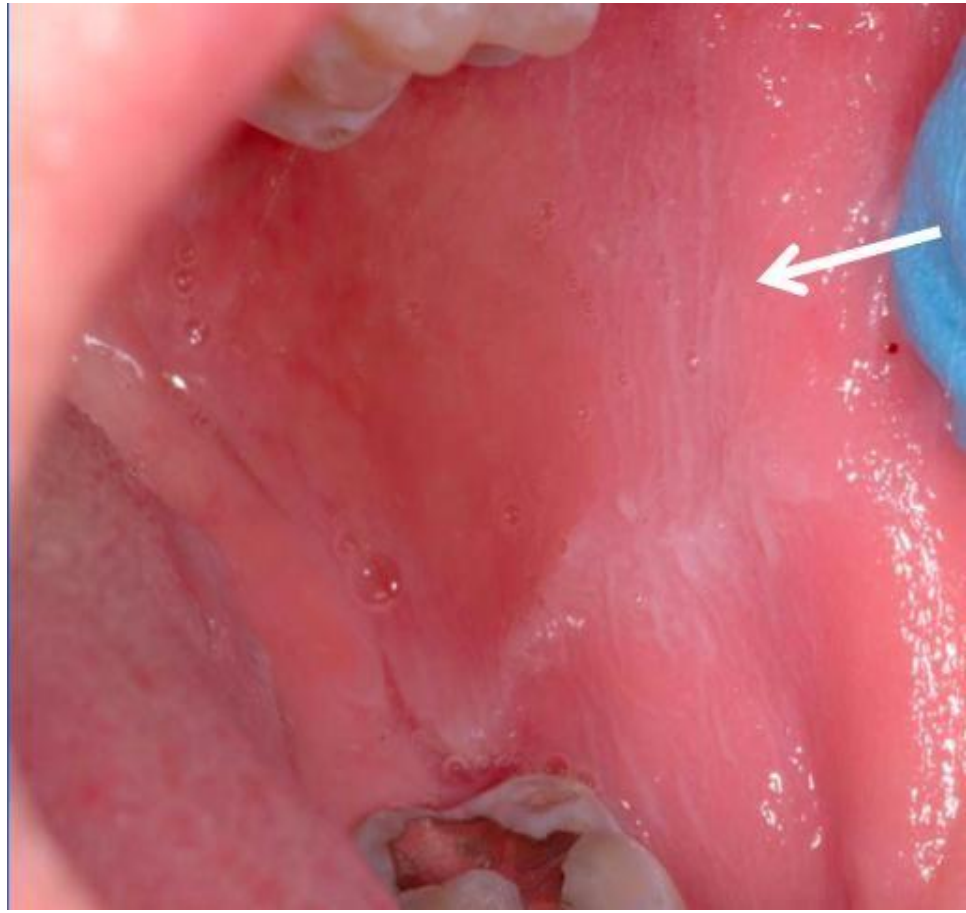
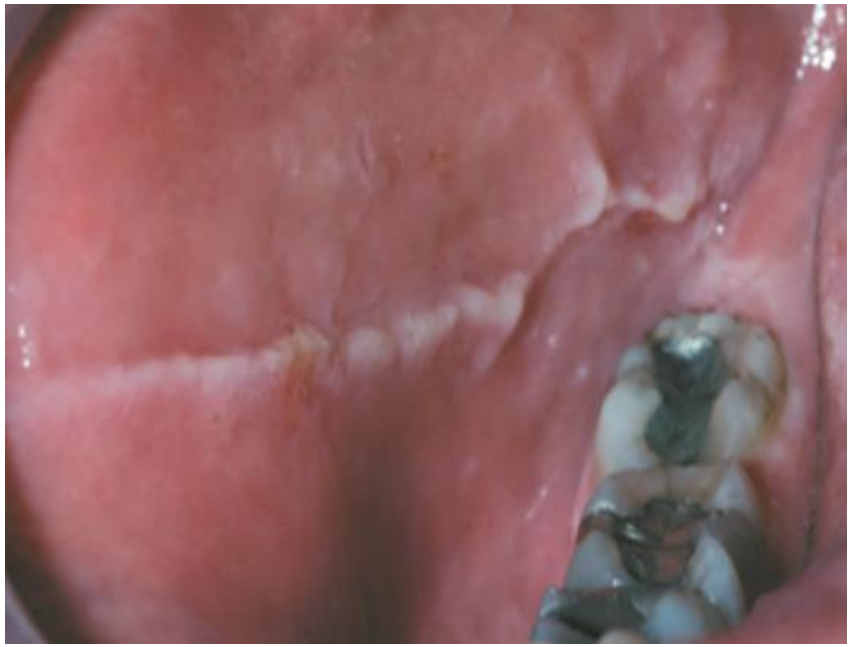
Leukoedema

- White-grey translucent appearance of the buccal mucosa
- ? Superficial intra-epithelial oedema and retention of superficial keratin
- Disappears when mucosa stretched



Frictional keratosis

- Chronic irritation to oral mucosa
- Lips, lateral tongue, buccal mucosa
- History and clinical examination
- Identify and eliminate predisposing causes



Pseudomembranous candidosis

- Creamy plaques
- Large areas of the oral mucosa
- “Wiped off”
- Erythematous mucosa

Hairy leukoplakia

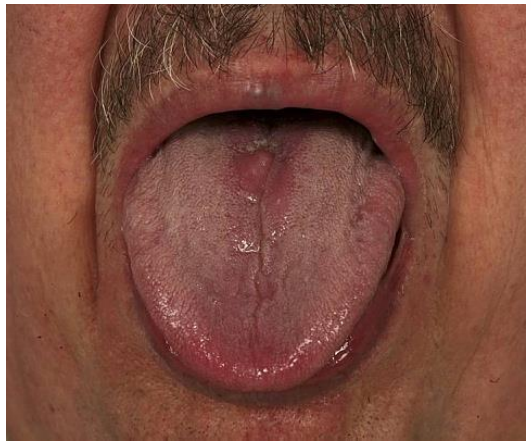
- EBV
    - HIV
    - Immunosuppression
- Corrugated white patch
- Lateral tongue, buccal mucosa
- Benign

White sponge naevus

- White sponge naevus
- Autosomal dominant inheritance
- Second decade
- Asymptomatic
- “Folded” white lesions
- Extra-oral sites affected

Chronic hyperplastic candidosis

- Chronic candidal infection of the mouth
- Typically affects labial commissures
- White, speckled plaques, nodules
- No longer considered potentially malignant condition



Common mucosal conditions and their management – red patches

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Erythema migrans

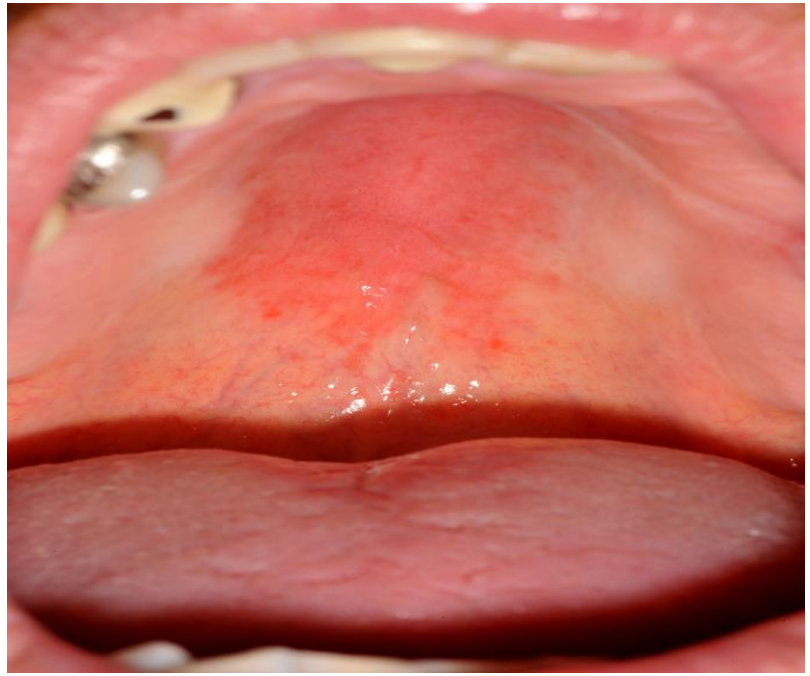
- Irregular depapillated, erythematous areas surrounded by pale well-demarcated margins
- Fissured tongue, other sites
- Affects any age group – 2% population
- Usually asymptomatic
- Appears and regresses

Erythema migrans

- Irregular depapillated, erythematous areas surrounded by pale well-demarcated margins
- Fissured tongue, other sites
- Affects any age group – 2% population
- Usually asymptomatic
- Appears and regresses

Acute erythematous candidosis

- Antibiotic/steroid use
- Red areas
- Common sites
- **Painful**



Chronic erythematous candidosis

- Denture stomatitis
- Chronic erythema of denture bearing area
- Hyperplasia
- Management

Median rhomboid glossitis

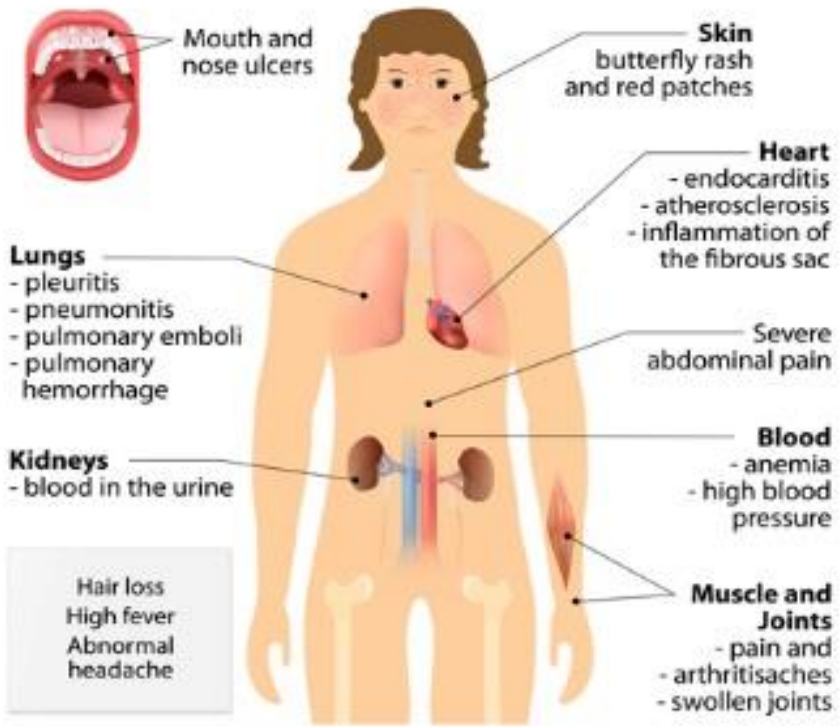
- Rhomboid area
- Midline dorsum of tongue
- Asymptomatic
- Loss of filiform papillae
- Predisposing factors

Desquamative gingivitis

- Generalised gingival erythema, desquamation, and oedema
- Clinical description not a diagnosis
- Manifestation of other conditions
- Biopsy is recommended to confirm the diagnosis

Plasma cell gingivitis

- Erythema and swelling of the gingiva
- Polyclonal plasma cells
- May extend beyond the gingiva
- Immunological reaction to an allergen
- Identification of offending agent and its exclusion where possible


Systemic lupus erythematosus
Mouth and nose ulcers
Skin
butterfly rash and red patches
Heart
- endocarditis
- atherosclerosis
- inflammation of the fibrous sac
Lungs
- pleuritis
- pneumonitis
- pulmonary emboli
- pulmonary hemorrhage
Severe abdominal pain
Kidneys
- blood in the urine
Blood
- anemia
- high blood pressure
Hair loss
High fever
Abnormal headache
Muscle and Joints
- pain and
- arthritisaches
- swollen joints

Iron deficiency anaemia

- F>M
- Angular cheilitis
- “Beefy” smooth tongue
- Brittle spoon shaped nails
- Mouth ulcers

Common mucosal conditions and their management – oral pigmentation

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ABCDE Rule

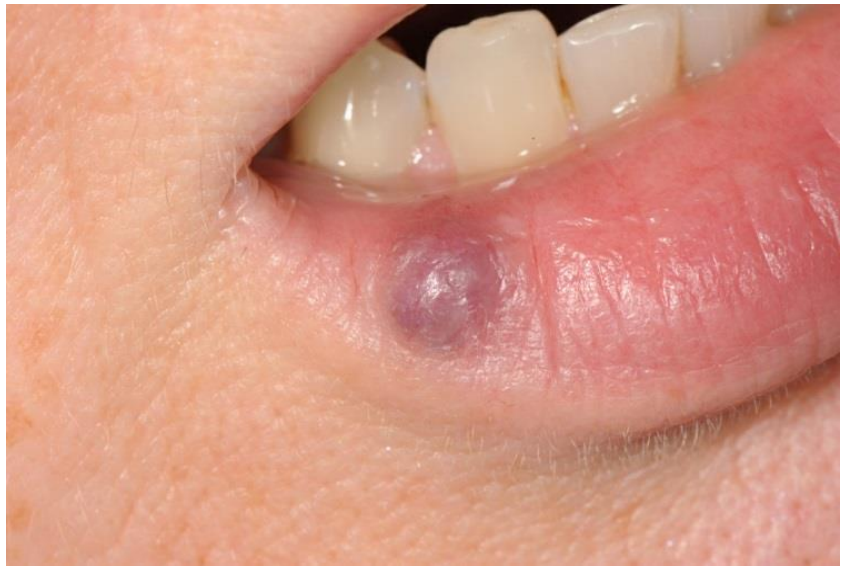
A	**Asymmetry**
B	**Border Irregularity**
C	**Colour variation across the lesion**
D	Diameter of the lesion > 6mm
E	**Evolution – rapid changes occurring in the lesion**

Physiological pigmentation

- Symmetrical distribution
- African, Asian, Mediterranean heritage
- Related to degree of skin pigmentation
- Increased melanocytic activity

Melanotic macule

- Usually solitary lesion
- Increase in melanin deposition
- <1cm
- Benign
- 1:1000 adults
- M=F



Vascular malformations

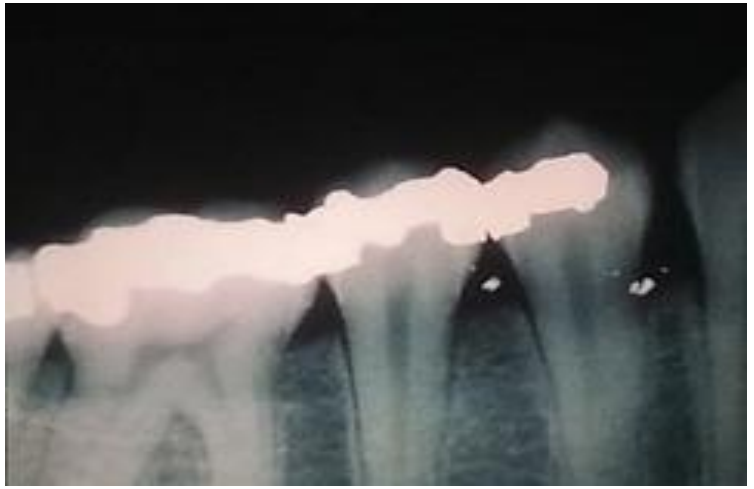
- Usually develop in adulthood
- Tongue, lips, buccal mucosa
- Well circumscribed flat or raised blue coloured lesions
- Diascopy
- Treatment if necessary

Foreign body

- Introduction of coloured foreign material ~ 1/1000
- Solitary flat asymptomatic blue/black/grey macule
- Gingiva, alveolar ridge, FOM, buccal mucosa

Foreign body

- Diascopy negative
- Clinical diagnosis
- Amalgam particles may be visible on IOPA
- Confirmed on biopsy



Smokers' melanosis

- Increased melanin production
- Smoking history
- Women are more commonly affected than men,
- Brown-black lesions
- Biopsy – atypical appearance
- Reduces after smoking cessation

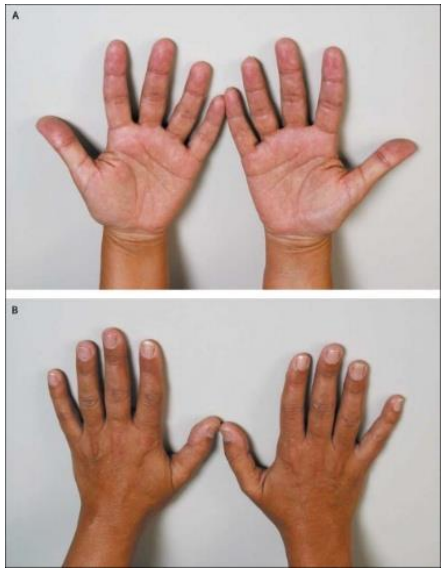
Drugs

- Antimalarials
- Antibiotics – minocycline
- Iron
- Chlorhexidine

Peutz-Jegher's Syndrome

- Rare, inherited syndrome
- Blue/black macules
- Localised periorally
- Intestinal polyposis
- Intestinal adenocarcinoma – 2%

Addison's Disease



- Chronic primary adrenal insufficiency
- Signs and symptoms can be non-specific
- General weakness, paraesthesia, fatigue, salt craving, nausea, abdominal pain, and weight loss
- Hyperpigmentation

Salivary gland disease

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Sialorrhea

- Drooling
- Perioral maceration
- Excessive salivation with no clinical abnormality
- Neuromuscular conditions

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Sialosis

- Unilateral v bilateral
- Gradual onset
- Persistent
- Soft, painless swelling
- Outward deflection of ear lobe
- Triggers

Mucocele

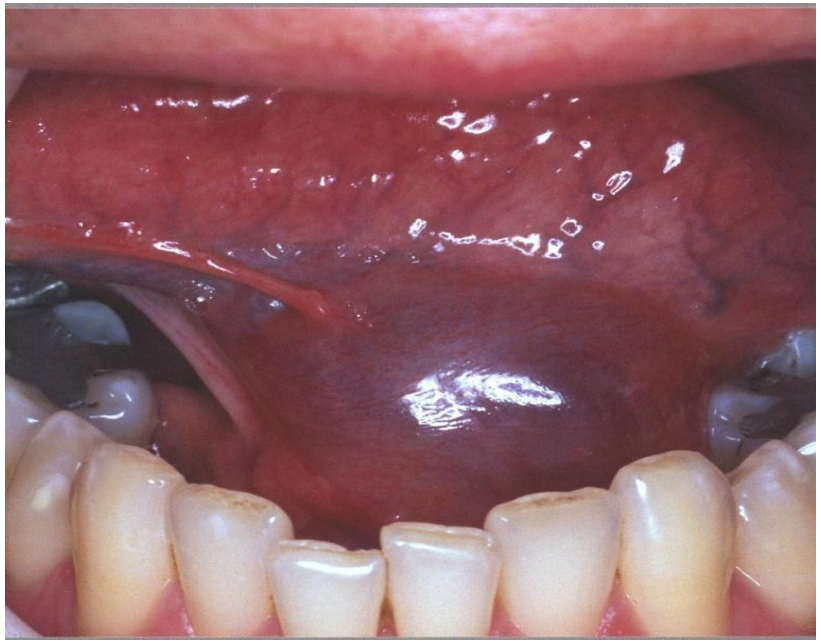
- Single
- Fluctuant, dome shaped
- Normal or bluish coloration
- Non-pulsatile
- 1mm-1cm
- Common sites
- Pathogenesis – trauma
- Surgical excision

Superficial Mucocele

- Small fluid-filled vesicle(s) on the soft palate, retromolar pad, posterior buccal mucosa, lower labial mucosa.
- Painless
- Rupture – superficial ulcer
- ? Meal time
- Association with
  - Lichen planus
  - Lichenoid drug reactions
  - Graft versus host disease

Ranula

- Anterior floor of mouth
- Unilateral
- 2-3cm in diameter
- Soft, fluctuant, blue
- Painless – speech
- Surgical intervention



Pleomorphic salivary adenoma

- Commonest neoplasm of salivary glands
- Firm mass extra orally or intraorally
- Normal overlying epithelium
- Painless and slow growing
- Palate, buccal mucosa, upper lip
- Malignant change in long standing PSA
- Surgical excision treatment of choice

Xerostomia

- Dry mouth

- Reduced saliva production

  - Polypharmacy
  - Immune related disease
  - Radiation damage
  - Dehydration
  - Anxiety
  - Development salivary gland abnormalities

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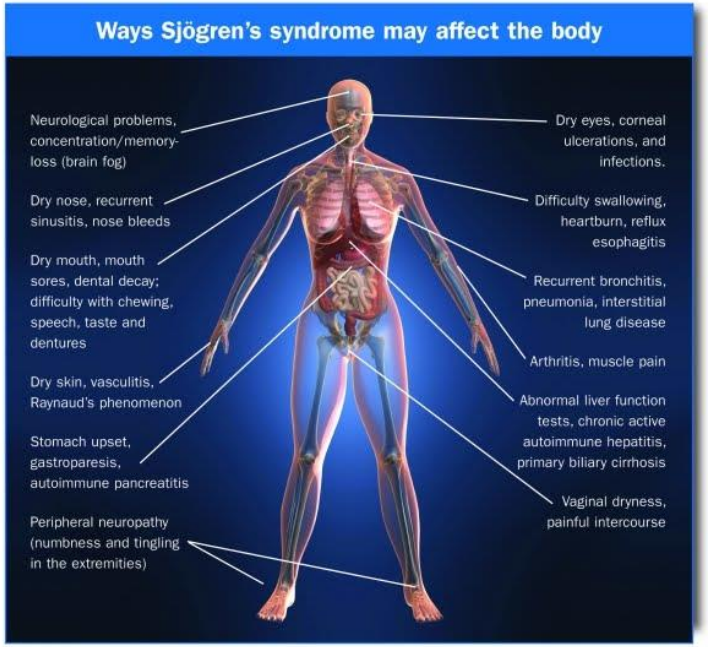
Sjogren Disease



- Chronic, autoimmune disease of unknown aetiology
- Dryness
- Fatigue and arthralgia
- Inflammatory arthritis, skin involvement, haematological abnormalities, neuropathies, interstitial lung disease and B-cell lymphoma
- Education, conserving, replacing and stimulating secretions; and preventing damage and suppressing underlying systemic disease activity

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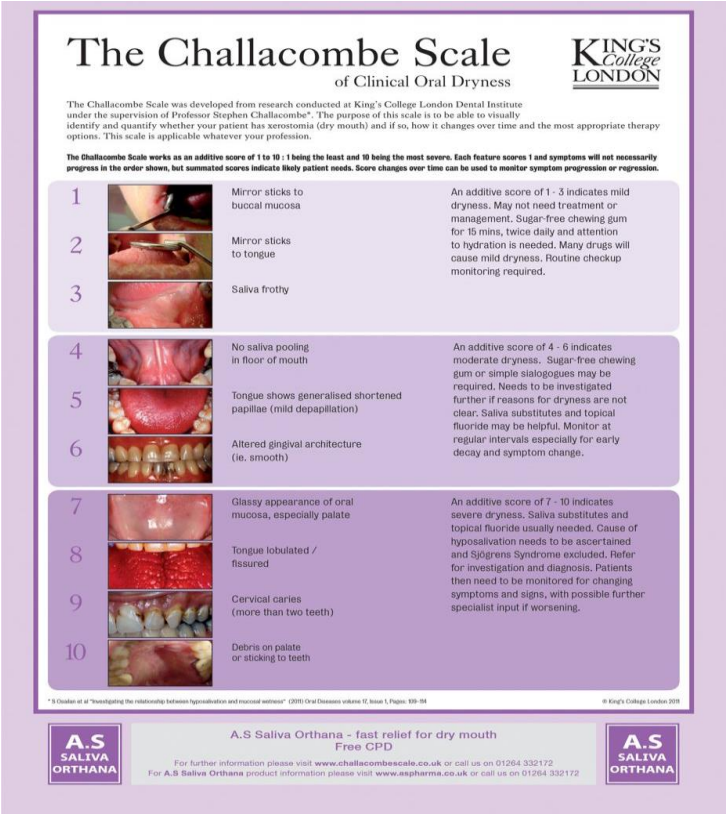
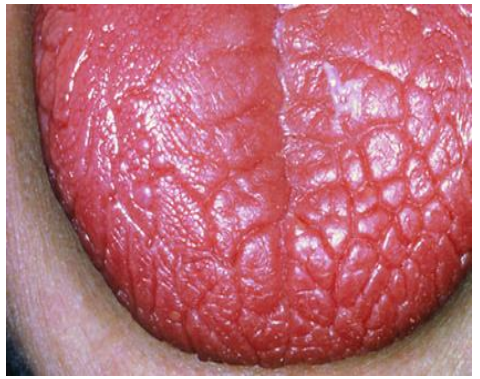
Clinical presentation

- Difficulty talking
- Dysgeusia
- Dysphagia
- Oral discomfort
- Caries
- Infection(s)





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Sjogren Disease

2024 Sjögren disease guideline summary sheet

British Society for Rheumatology

This guideline provides evidence-based recommendations for the management of adult and juvenile onset Sjögren disease (SD).

Step one

Confirm diagnosis:

Has the diagnosis of SD been made in line with 2016 ACR/EULAR criteria for adult SD:

- Anti-Ro antibodies (score 3)
- Focus score of > or =1 (score 3)
- Abnormal ocular staining score > or =5 (score 1)
- Schirmer's test without anaesthetic result of < or = 5mm/5 min (score 1)
- Unstimulated salivary flow <0.1ml/min (score 1)

Classification as SD requires a score of 4 or more.

If no access to lip biopsy consider ultrasound as an alternative to support diagnosis.
If treating a patient in the UK, enter them into NEIAA database.

Check for co-morbidities - clinical exam, urine dip, routine bloods (FBC, U&E/LFT), immunoglobulins, C3/C4, TFT, TTG, CK, serum bicarb, anti-CCP, RhF, vitamin D, anti-dsDNA.

Explain diagnosis and signpost to appropriate resources e.g. Sjögren's UK website.

Step two

Treat symptoms:

- Dry eyes – start preservative-free lubricant eye drops 4 times per day, advise warm eye compress for 10 min daily
- Dry mouth – saliva substitutes, dental care
- Systemic dryness – consider pilocarpine 5mg once daily increasing step-wise to 5mg 3 times per day (max 5mg x 6 daily)

Step three

Systemic management:

- Consider hydroxychloroquine
- Consider other DMARDs for specific indications (see guideline)

Step four

Extras and special situations:

- If planning pregnancy – counsel re neonatal lupus and congenital heart block
- If co-morbidities – treat appropriately (see guideline)
- Early diagnosis of lymphoma is crucial for curative management. See guidelines for warning signs and symptoms

Lifestyle

- Long-term monitoring of the condition is required, especially in those at high risk of lymphoma
- Wear glasses to reduce tear evaporation
- Maximise omega 3 through diet or supplements
- Avoid dry, smoky environments
- Humidify environment – turn down heating, saucers of water on radiators
- Reduce sugar consumption
- Meticulous dental care
- Drink plain water
- Keep active

For more information, read the full guideline at rheumatology.org.uk/guidelines

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Management

- Recommend regular brushing with fluoride toothpaste, proactive dental care and the use of xylitol containing products as an alternative to sugar to prevent dental decay

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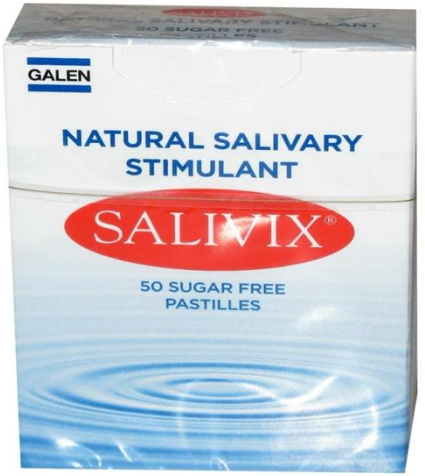
Management

- Saliva replacement

Management

- Salivary sialagogues



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- Thank you for listening!
- Questions?

https://bisom.org.uk/clinical-care

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