Soft tissue Assessment
Study objectives

• Identify common oral conditions that may be observed during the intra-oral soft and hard tissue examination.

• Identify the normal gingiva, periodontium and mucosa in children and adolescents.
Types of oral soft tissue lesion

- Lesions affecting the gingiva
- Recurrent oral lesions
- Ulcerative lesions
- Soft tissue cysts
- Development anomaly
- Others
The gingiva

The gingiva is divided into three parts:

- the papillary gingiva
- the marginal gingiva
- the attached gingiva
The gingiva - 2

• The papillary gingiva in the child differs slightly from that of the adult because the interdental col area is often absent.

• The interdental col is absent because of spacing in the deciduous dentition.

• This is replaced with a interdental saddle area which is keratinised.
• This difference may contribute to the reduced incidence of periodontal lesions in children as the interdental area is less prone to development and progression of inflammatory process due to its keratinisation and less conducive environment for bacterial growth.
Marginal gingiva

- This includes the gingiva crevice and free gingiva margin.
- The sulcus depth tends to be greater in the deciduous dentition.
- The free gingiva is also thicker and rounder. This is because of the cervical bulge and constricted cementoenamel junction in deciduous teeth.
Marginal gingiva - 2

• The marginal gingival is also flaccid and easily retractable as verified on clinical examination with an air spray.

• This is because of the immature connective tissue composition, immature gingiva fibre system and increased vascularisation.
Attached gingiva

- The attached gingiva appears less dense and darker pink than that of the adult.
- This is because it is less keratinised and has greater vascularity than the adult gingiva.
- It has less connective tissue density and thus appear less stippled than the adult attached gingiva.
Gingiva diseases and conditions

Chronic gingivitis

• This is the most common form of disorder affecting the gingiva in children.

• Its prevalence is low in young children and increases as children grow older especially during period of dental eruption and puberty.
Chronic gingivitis - 2

• Its main aetiological factor is plaque. Calculus may play a role but calculus formation and its prevalence increases with age.

• Hardly is periodontal disease seen in children.
Chronic gingivitis - 3

Reasons for low periodontal diseases in children

- There is greater anabolic activity over catabolic activity in children thus making the periodontium more resistant to breakdown; And when it occurs, may enhance concurrent repair.
Chronic gingivitis - 4

Reasons for low periodontal diseases in children

- The oral flora is different in children. The aetiological agents – spirocheates and bacteriodes melaninogenicus – are established late in the oral flora of children.
Chronic gingivitis - 5

Reasons for low periodontal diseases in children

- Thirdly, the plaque in children have lower irritational potentials. Preschool children can withhold oral hygiene for 27 days with no consequences unlike in adults where inflammatory changes become obvious by the 3rd day.
Systemic disorders associated with periodontitis

- **Leukemia** which is a neoplastic disorder of the white blood cells. The agranulocytic type is often associated with periodontal disease, oral ulcers and gingiva enlargement.
Systemic disorders associated with periodontitis - 2

- **Cyclic neutropenia** which is an autosomal dominant disorder in which there is cyclic reduction of neutrophils in a 21 day cycle.
Systemic disorders associated with periodontitis - 3

• **Hypophosphatasia** which is an autosomal recessive disorder characterised by low serum alkaline phosphatase important for bone metabolism.
Systemic disorders associated with periodontitis - 4

- **Papillon le Fevre syndrome** which is an autosomal recessive disorder in which there is hyperkeratosis of the palms of the hand and sole of the foot.
Systemic disorders associated with periodontitis - 5

- **Acrodynia** which is a result of excessive exposure to mercury.
- **Vitamin D resistant** rickets is a sex linked dominant disorder which is resistant to vitamin D therapy due to renal tubular malresorption.
Systemic disorders associated with periodontitis - 6

- **Diabetes mellitus** show early onset of periodontitis in children with the disorder.
- **Down syndrome** which is a genetic disorder of trisomy 21. There are many orofacial manifestation including periodontitis.
Early onset periodontitis

- Juvenile periodontitis also known as early onset periodontitis.
- Most often seen in children and adolescent is the localised type which is also self limiting.
Early onset periodontitis - 2

- It affects mainly the permanent first molars and incisors with rapid bone loss in these regions not commensurate with the amount of local irritants present such as plaque and calculus.
Early onset periodontitis - 2

- Susceptible individuals have both defective chemotactic neutrophils and infection with highly virulent strains of *Actinobacillus actinomyctemcomitans*. 
Acute pericoronitis

- This results from an operculum resting across the occlusal surface of an emerging tooth.
- The operculum attracts debris which may lead to inflammation and infection.
Acute pericoronitis - 2

- Regional lymphadenopathy and trismus may then result.
- Pericoronitis not reported in primary dentition.
Acute pericoronitis - 3

- Often reported in association with the impacted third molar.
- Incidence of acute pericoronitis commonest with distoangular impaction of the third molar.
Acute pericoronitis - 4

- Cases of pericoronitis associated with first and second molar in children have been reported.
- Cases of acute pericoronitis associated with partially erupted first and second molars in children.
• Treatment of pericoronitis associated with 1\textsuperscript{st} and partially erupted 2\textsuperscript{nd} molar involved debridement of the operculum using warm saline irrigation.

• Antibiotic prescription also helpful.
Acute pericoronitis - 6

- Treatment of pericoronitis associated with impacted third molar is surgical extraction.
- For pericoronitis associated with unimpacted third molar, debridement of the operculum using warm saline irrigation should be considered.
Acute necrotising ulcerative gingivitis

- This is a condition most often reported in children in the developing countries.
- It is an anaerobic infection characterised by formation of grey pseudomembrane, ulcers and necrosis of the interdental papilla.
Acute necrotising ulcerative gingivitis - 2

- Associated with malnutrition.
- Co-infection with measles or other viral infection important for initiation of ANUG in malnourished children.
Acute necrotising ulcerative gingivitis - 3

- Associated with a characteristic fetid odour from the mouth resulting from tissue necrosis.
- There is fever, malaise, gingival pain, lots of plaque and calculus, stains, and increased salivation.
Acute necrotising ulcerative gingivitis - 4

- Lesion responds rapidly to improved oral hygiene.
- Underlying systemic problem must also be treated to prevent recurrence.
Acute necrotising ulcerative gingivitis - 5

Definitive treatment

• Prescription of metronidazole to take care of the anaerobic infection.

• Prescription of a broad spectrum antibiotics also adequate as this mops up the aerobes making it difficult for the facultative anaerobes to survive in the presence of oxygen.
Acute necrotising ulcerative gingivitis - 6

Definitive treatment

• Recommend high protein diet. Important to advice patients on how to find cheap source of high protein.
• Gross oral debridement important. Fine scaling to be done when oral pain subsides.
• Use of warm saline mouth wash after meals of immense benefit.
Drug induced gingiva hyperplasia

- Arise from use of phenytoin used in the management of epilepsy.
- Also found associated with cyclosporin, an immunosuppressant, and nifedipine.
Drug induced gingiva hyperplasia

- Severity of hyperplasia related to level of oral hygiene.
- Some degree of hyperplasia also develop within one month of use of orthodontic appliances even with good oral hygiene practice.
Lesions that affect the buccal mucosa

- Recurrent ulcers
- Herpangina
- Traumatic ulcers
- Soft tissue cysts
- White spongy nevus
- Geographical tongue
- Candidiasis
Recurrent oral lesions

- Recurrent oral ulcers are apthous ulcers and herpes infection.
- The diagnosis of the two lesions are often mixed up because their clinical features and triggering factors are similar.
- It is however important to distinguish between the two because of the different aetiology and different treatment.
Herpes simplex infection

- This is an infection of the epithelium affecting the mucosa and the skin.
- Primary herpes infection is called acute herpetic gingivostomatitis and is very common in children.
- The recurrent form is called herpes labialis as it commonly affects the lips and the perioral region.
Herpes simplex infection - 2

- The oral infection is caused by herpes simplex type 1.
- However where oral sex is practiced (in sexually abused children), oral lesions may be caused by herpes simplex type 2.
Herpes simplex infection - 3

- The lesion appears as vesicular eruptions on the mucous membrane with viral particles present within the vesicular fluid.
- Lesion transmitted by direct contact with an individual with an active lesion.
Herpes simplex infection - 4

- About 90% of primary infections are sub-clinical with non specific symptoms such as cervical lymphadenopathy, low grade fever and non discreet oral ulcers.
Herpes simplex infection - 5

- Only about 5-10% of patients develop frank symptoms.
- Most often affects children age 6 months to puberty.
Herpes simplex infection - 6

- The initial symptom is lack of sensation or tingling sensation in the affected area.
- Acute gingivitis then develops in the gland bearing areas of the fixed oral mucosa especially the interdental papilla, tongue and lips.
Herpes simplex infection - 7

- Active lesions have constitutional symptoms such as increase in body temperature, laise, fever.
- Some children may have headache, irritability, cervical lymphadenopathy and myalgia.
Herpes simplex infection - 8

- These symptoms often precede with oral manifestations.
- Subsequently, vesicles erupt.
- These burst very readily and are really seen at the time of clinic visit. This is because they are of epithelial origin with very thin walls.
Herpes simplex infection - 9

- When they burst, they leave ulcers.
- The ulcers appear as round discreet areas which may coalesce to form groups of ulcers approximately 1-3mm in diameter on the attached and unattached mucosa; keratinised and non-keratinised mucosa.
Herpes simplex infection - 10

- Symptoms last for 1-2 weeks.
- Lesions are self resolving.
- Ulcers heal without scars.
Herpes simplex infection - 11

- Lesion often misdiagnosed for malaria fever due to associated high fever.
- Most times, the oral lesion are overlooked.
Herpes simplex infection - 12

- Diagnosis is often established by clinical findings.
- A cytological smear of an intact vesicle or a recently ruptured vesicle can also be done.
- This would show epithelial giant cells containing intranuclear eosinophilic viral inclusions typical of herpes viral infection.
Herpes simplex infection - 13

- Differential diagnosis is ANUG because of the involvement of the interdental papilla.
- However with ANUG, the interdental papilla is completely destroyed due to necrosis while in Herpes simplex infection, the papilla remains intact.
Herpes simplex infection - 14

- The lesion may also be misdiagnosed for recurrent apthous ulcers as they both present with multiple oral lesions.
- However, apthous ulcer only affect mobile or unattached mucous membrane and there are no constitutional symptoms.
Herpes simplex infection - 15

- Treatment is usually supportive. This includes bed rest, increased fluid intake and giving of dietary supplements.
- Lidnocaine cream can be used every 3 hours to dress the ulcer. This reduces pain. However, the use of the cream prolongs healing of the ulcers.
Herpes simplex infection - 16

- Patient is stay away from spicy food.
- To reduce pain from spicy food, give children 20mls of phenadyl elixir or Benydyl cough syrup as mouth rinse.
- This gives a protective covering over the ulcer and reduces the inability to feed.
Herpes simplex infection - 17

- Oral rinse should not be given for more than 8 doses in 24 hrs and should not be given to children who cannot expectorate.
Herpes simplex infection - 18

- For children who are immunocompromised eg malnutrition, prescribe antibiotics so as to prevent secondary infection.
- Antibiotics should not be prescribed routinely for the management of this lesion as this is a viral infection NOT a bacteria infection.
Herpes simplex infection - 19

- Complications are unusual.
- Children may however become dehydrated.
- The infection may be transmitted to the eye by rubbing infected fingers into the eye giving rise to herpes keratitis. This may lead to blindness.
Herpes simplex infection - 20

- After a single infection of herpes simplex, the virus remains latent in the body in both clinical and subclinical cases.
- The virus lies latent in the trigeminal nerve ganglion.
**Herpes simplex infection - 21**

- In many cases, the virus may not be reactivated.
- In about 20-40% of cases, virus may be reactivated periodically resulting in recurrent herpes infection.
Herpes simplex infection - 22

• Triggering factors for recurrence include stress, exposure to UV light, trauma and illness.
• Trauma from dental procedures can trigger a recurrence.
• Menstrual stress could also be a triggering factor.
• Recurrent lesions are often found on the lips at the junction of the vermillion border and the skin.
• It could also arise anywhere on the face such as the nose.
• They may develop as solitary or multiple lesions with each episode or recurrence.
Apthous ulcers

- Apthous stomatitis is a condition characterised by recurrent discreet areas of ulceration which are almost always painful.
- They generally start as an ethyhematous papilla which soon undergoes necrosis to form a small crater lie ulcer.
Aphthous ulcers - 2

- The ulcers are usually small but in rare cases can become fairly large.
- The ulcer is covered by a fibrin coat appearing as a white to yellow membrane surrounded by an erythematous hallow.
- Ulcers heal within 1-2 weeks nearly always without scarring.
Apthous ulcers - 3

- Females are more often affected.
- Patients with recurrent episodes often have a family history.
Aphthous ulcers - 4

- The aetiology is unclear but recent studies have supported an immunopathological basis.
- It is suggested to be an autoimmune disorder. Circulating autoantibodies against the oral epithelium have been detected.
- Some propose that the lesion is due to hypersensitivity reaction to the L form of *Streptococcus sanguis*.
Aphthous ulcers - 5

- Triggering factors include minor trauma, stress, hormonal disorder and food intolerance.
- The prodromal period consists of a tingling or burning sensation in the area of oral mucosa 24-48 hours prior to the clinical lesion.
Apthous ulcers - 6

- The prodromal is followed by the appearance of crops of ulcers.
- The first visible clinical lesion observed is a tiny red papillae which develops a central fibrin membrane in the area of a mobile mucosa.
Apthous ulcers - 7

- The central area then becomes necrotic and then develops an ulcerated base with an erythematous hallow.
- The most common location are the labial mucosa, buccal mucosa and the floor of the mouth.
Apthous ulcers - 8

There are 4 types of recurrent apthous stomatitis. These are the:

- Minor
- Major
- Herpetiform
- Those associated with other disease process.
Apthous ulcers - 9

Minor aphthous ulcer
• It consist of ulcers are about 2-4mm in diameter.
• Found on the mobile mucosa
• Usually fewer than five in number.
• Often heal within two weeks without scarring.
• This is the classic form of the disease.
Apthous ulcers - 10

**Major apthous ulcer**
- Presents as ulcer with a diameter of 10mm or greater.
- Usually occur in the posterior part of the mouth.
- Takes about 6-8 weeks to heal.
- Healing leads to extensive scarring because of the extensive amount of tissue damage.
Apthous ulcers - 11

Herpetiform apthous ulcer

- Presents as multiple crops of lesions
- Ulcers are about 1-2mm in diameter giving an appearance of herpetic gingivostomatitis.
- Unlike herpetic gingivostomatitis, they however do not occur on attached gingiva and are not preceded by vesicles.
Apthous ulcers - 12

- Recurrent apthous ulcers may be found associated with Chronn’s disease, ulcerative colitis, Behcet’s disease, malabsorption syndromes, HIV infection and cyclic neutropenia.
Apthous ulcers - 13

- Diagnosis is based on the patient’s history and clinical findings.
- Histopathological and microbiological tests are rarely useful except when it is found in association with other diseases.
Aphthous ulcers - 14

- Topical or systemic steroids can be used to prevent recurrence or shorten the period of current lesions.
- Medications do not cure but control the lesion.
- When medication is stopped, the lesion recurs.
Aphthous ulcers - 15

- Topical steroid used include 0.05% flucononide gel or 0.05% dexamethasone gel.
- Kenalog in oral base can also be prescribed but have not been found effective as others.
Aphthous ulcers - 16

- Topical steroids are more effective when used during the prodromal period.
- Steroid is applied to the area 3-4 times daily with a dry gauze.
- The patient does not drink 15-30 mins after application of steroid.
Apthous ulcers - 17

- Prednisolone is prescribed as systemic steroids for those with multiple lesions per year or those with multiple ulcers with each episode.
Aphthous ulcers - 18

- Tetracycline mouth wash can also be used (250mg capsule dissolved in 30mls of water) six times daily in divided doses of 5mls.
- Lesions may be short lived in some patients while in others, they may have the lesion through their lifetime.
Herpangina

- Herpangin is a viral infection characterised by appearances of vesicular ulcerative lesions on the anterior faucial pillars, soft palate and tongue.
- Before the appearances of the ulcerative lesions, the patient complains of pain, fever, headache, vomitting, abdominal pain and pharyngitis.
Herpangina - 2

- There is also regional lymphadenopathy.
- Disease is caused by coxsackie A and B virus.
- The lesion is contagious and common amongst school aged children.
- Infection is self limiting and recovery occurs within a week.
Other causes of ulcers in children

- Post traumatic ulcers which may result during sleep, talk or mastication.
- They could be electrical, thermal or chemical injury.
Other causes of ulcers in children - 2

- Fractures, caries and malpositioned teeth as well as prematurely erupted teeth can contribute to surface ulcerations.
- Poorly fitting appliances such as space maintainers, orthodontic appliances or crown works can also cause trauma.
Post traumatic ulcers

- Predisposing factors include nocturnal parafunctional habits such as bruxism and digit sucking which may result in ulcers found on the buccal and lingual mucosa, lateral border of the tongue and the palate.
• Chemical ulcers could result from aspirin burns or the use of ‘touch and go’ and battery water to manage caries related pain.
Post traumatic ulcers - 3

- Mechanical trauma may result from ill fitting appliances affecting the lateral and ventral surface of the tongue as well as the alveolar mucosa.
Post traumatic ulcers - 4

- In rare cases, there may be self induced trauma as seen in children with autism.
- Such patients may need medical and psychological evaluation.
Post traumatic ulcers - 5

- Healing of the ulcers may be uneventful but may be delayed when the lesion overlies the maxillary and mandibular alveolar ridge.
Post traumatic ulcers - 6

• When the ulceration become chronic due to continuous trauma, there may be tendencies for malignant transformation.

• There is no evidence to support this. However the lesion may appear malignant due to the rolled up margins resulting from chronicity of lesion.
Age related injuries

- Rega-fede disease which is sublingual ulcerations seen in new born children.
- This may result from chronic mucosa trauma from adjacent primary teeth.
- It is usually associated with breastfeeding and seen in patients with natal or neonatal teeth.
Age related injuries - 2

• In younger children, the main cause of trauma is fall.
• There may also be electrical burns on the lip and lip commissure areas. This is because children are curious about items they are not familiar with. As they explore items by putting them in the mouth.
Age related injuries - 3

- In older children, trauma may arise from the rough edges of caries, thermal burns from eating of hot food.
- Management is basically supportive.
- Rarely is there any form of morbidity or mortality resulting form these lesions.
Soft tissue cysts

Eruption cysts

- Are developmental cysts with histological features similar to dentigerous cysts.
- Surround the crown of a tooth and is visible as a soft fluctuant mass on the alveolar ridge.
- More often associated with the permanent dentition
- Molars and canines in the permanent dentition are most often affected.
Soft tissue cysts - 2

Dentigerous cysts

- Colour vary from blue to dark red.
- Also described as eruption haematoma when the fluid content is blood.
- Arise from cystic changes of reduced enamel epithelium.
Dentigerous cysts

- No treatment often needed as the cysts ruptures spontaneously on tooth eruption.
- In some cases however, there may be the need to surgically excise the roof of the cyst to expose the crown of the tooth and aid eruption process.
Types of dentigerous cysts

- **Inclusion cysts:** This appears as a small white or gray lesion on the mucosa, alveolar ridge or hard palate. They are present in 75% of newborns; are symptomatic, may be multiple, do not increase in size, and usually shed spontaneously in about 3 months of life. There are three time.
Types of dentigerous cysts - 2

• **Esptein pearls**: may be found on the mid palatal raphe of the hard palate.
Types of dentigerous cysts - 3

- **Bohn’s nodule**: are remnants of salivary glands and are located on the buccal and lingual mucosa or on the hard palate away from the mid palatal raphe.
Types of dentigerous cysts - 4

- **Dental lamina cyst**: are found on the crest of the alveolar ridge.
Mucocele

- These are salivary gland lesions of traumatic origin.
- Most commonly located on the lower lip.
- It forms when the main ducts of the minor salivary gland is torn resulting in a build up of mucus within the fibrous connective tissue.
Mucocele - 2

- It is a pseudocystic subepithelial lesion.
- Its colour may be blue or translucent.
- It is also known as mucous retention cyst.
Mucocele - 3

- The size of mucoceles vary from 1 mm to several cm.
- On palpation, mucoceles may appear to fluctuant but can also be firm.
- They appear for days to years, and may have recurrent swelling with occasional rupturing of its contents.
Mucocele - 4

• Treatment typically involves surgical excision, with removal of associated minor salivary glands to prevent recurrence.
White spongy nevus

• It is a white diffuse spongy keratotic lesion on the buccal mucosa.
• Usually presents as a bilateral lesion and may be seen occasionally on the tongue.
White spongy nevus - 2

- Can be easily confused with candida, lichen planus or hereditary benign intraepithelial dyskeratosis.
- Inherited in an autosomal dominant fashion.
- The lesion persists throughout life.
- No treatment needed.
Candidiasis

• This is a fungal infection which occur commonly 5-7 days after birth.
• Lesion caused by *candida albicans* and may be transmitted from the mother’s vagina at birth.
• May also arise as a result of systemic disease eg HIV infection, prolonged use of antibiotics or immunosuppressive diseases.
Candidiasis - 2

- The buccal, lingual, gingiva, tongue and palate are often involved.
- Appears as multiple, small white curdlike patch lesions that can easily be cleaned off the mucosa surface exposing an area of erythema and ulceration which readily bleeds.
Candidiasis - 3

- Topical nystatin can be used for treatment when not as a result of other systemic diseases.
Soft tissue tumours

- Can be classified as benign oral mucosa tumours, benign gingival and mandibular tumors, and malignant gingiva and mandibular tumour.
Soft tissue tumours - 2

- Diagnosis is based on critical evaluation including making a sound judgement on whether the lesion is congenital or acquired.
Soft tissue tumours - 3

• Also look out for historical points such as age of onset of lesion, any functional impairment, rapidity of growth and extension, fluctuation in size, appearance of the lesion.
• This gives suggestive pointers to whether the lesion is inflammatory, ulcerative or bleeding.
Soft tissue tumours - 4

- Also evaluate for colour changes, associated pain, paraesthesia or anaesthesia.
- It is important to check for mobility of the lesion, tenderness, presence of a bruit or if lesions blanches on pressure.
Soft tissue tumours - 5

• 91% of lesions are benign while 9% are malignant.
• 39% are found in the first 4 years of life and the remaining 61% are diagnosed between 5-14 years.
• Males and females are equally affected.
• 2/3rds of the lesion occur in soft tissue, 5% in salivary glands and 27% occur in the mandible.
Types of oral mucosal tumors

These could be:
- Vascular lesions
- Lymphatic malformation
- Fibrous tumors
- Epithelial tumors e.g., papillomas, white spongy nevus
- Harmatomas
- Pyogenic granuloma
- Salivary gland tumors e.g., pleomorphic adenoma
Vascular lesions

- Incidence is about 26% in all newborns.
- About 22% occur in preterm children.
- 12% occur in the first year
- A third is life threatening.
- Site of the vascular lesions in the oral cavity include the lip, cheek and the tongue.
Classification of vascular lesions:

- Haemangioma which may be in the proliferating, resting or involuting phase.
- Vascular malformation which may affect the capillaries, veins, arteries or just the fistula.
Haemangioma

- These are endothelial cells proliferations
- Present in about 40% of newborn.
- Others may arise during early childhood.
- There is a female preponderance of occurrence in a ratio of 5:1.
Haemangioma - 2

- They are usually seen as small red mark that grow rapidly during the post natal period.
- They then reach the rest period and then slowly involute.
Haemangioma - 3

Types of haemangioma

• Superficial haemangioma also known as strawberry or spider nevus.
• Deep haemangioma used to be called carvenous.
• Mixed form.
Haemangioma - 4

Treatment of haemangioma varies
• Observe as about 80% of cases resolve spontaneously.
• Use of medical therapy eg steroids which induces vasoconstriction due to competition for oestrogen receptors.
Haemangioma - 5

- Steroid indicated when the patient has thrombocytopenia, airway obstruction, or functional impairment such as swallowing and speech problems.
Haemangioma - 6

- Treatment given over 30-90 days.
- In about 30-90% of cases, response is observed in 2-3 weeks.
- In about 30% of cases, there is rebound growth.
• Interferon alpha 2a can also be used. This is used to treat life threatening haemangiomas or those that are refractory to steroids. The medicament inhibits angiogenesis and is given for 4-19 months.
Haemangioma – 8

- Antifibrinolytic agents such as aminocaproic acid or trexamic acid. They are used to manage large carvenous haemangioma usually seen in infants. This agents cause sequestration and destruction of platelets.
Sclerotherapy can be used. This involves the use of 96% ethanol injected into the lesion as a single or multistage injection over weeks leads to resolution of the lesion due to fibrosis formation.
• Laser therapy also has its usefulness when managing small defined lesions present on the tongue or oral mucosa.
Haemangioma – 11

- Surgery indicated in cases with uncontrolled haemorrhage or ulceration where there is rapid growth of lesion, pain, infection, airway obstruction, severe deformity, thrombocytopenia or cardiovascular compression. Also when there is persistent hemangioma after 5-6yrs or where there are occurrences of other complications.
Haemangioma – 12

• Surgical options include total, subtotal or staged resection with or without pre-operative embolisation, with or without angiography.
Vascular malformation

- These are normal endothelial cell products
- They are recognised at birth in 90% of cases.
- The changes in size of the lesion is commensurate with the child’s growth.
- Female to male occurrence is 1:1
Vascular malformation - 2

- Treatment indicated when the lesion is life threatening.
- Treat by strangulating the feeder vessel.
Lymphatic malformation

- Lymphatic malformation are called lymphangioma and are usually rare.
- Lymphangioma are regarded to be the lymphatic counterpart of the haemangioma.
- They can occur on the tongue, cheek and on the floor of the mouth in that descending order.
Lymphatic malformation - 2

- Lymphangioma usually occur as a result of arrest of the development of the lymphatic system wherein the jugular sac fails to reunite with the venous system resulting in accumulation of the lymphatic fluid within the sacs.
Lymphatic malformation - 3

- The three types are simple, cavernous and cystic hygroma.
- Mixed lesions (simple and cystic hygroma) are usually found on the floor of the mouth.
• Sclerosing agents may be used to treat the lesion.
• Sclerosing agents are used as intralesional injections.
Lymphatic malformation - 5

- The sclerosing agents usually incite an inflammatory response, increasing the presence of T lymphocytes, cytokins and natural cell killers at the site of the lesion. There is also increased vascular permeability.

- It results in resolution of the lesion with acceptable results.
Lymphatic malformation - 6

- Side effects of use of sclerotic agents include fever and pain.
- The therapy may not result in any success in some cases.
Lymphatic malformation - 7

- Surgical excision is a delayed management option.
- Surgery considered when there is evidence that the lesion is asymptomatic, and no rapid growth.
Lymphatic malformation - 8

- Surgery is delayed to ensure the possibility of involution of the lesion which occur in a small percentage of cases.
- Excision is done at about age 3-5 years.
- Excision may be indicated when there is repeated episodes of infection associated with symptoms and functional impairment.
Developmental anomalies

- **Melanotic neuroectodermal tumours**: a benign tumor of neuroectodermal origin. Appears as an exophytic non ulcerating mass on the alveolar mucosa. The tissue may appear brown in colour due to pigmentation. Radiographs shows floating teeth appearing in the tissue mass. Surgical excision is usually necessary.
Developmental anomalies - 2

- **Congenital epulis**: this often found in newborn child and appears similar to dental lamina cyst. Usually located in maxillary anterior region. Many anterior region. many cases recede spontaneously but large ones may need to be excised. Recurrence is unlikely.
Ankyloglossia

- The lingual frenum is attached higher than normal on the mandibular alveolar ridge and ventral tip of the tongue along the midline raphe thereby restricting tongue movement.
- Rarely cause speech or feeding defect as the child easily adapts.
Ankyloglossia - 2

- There is partial ankylosis where the frenum is short but tongue movement is not restricted.
- Complete ankylosis where tongue movement is completely restricted.
Ankyloglossia - 3

- Early surgical intervention contraindicated as it causes bilateral salivary gland infection.
- When surgery is indicated, frenulotomy is done.
Geographical tongue

- Also known as migrating glossitis.
- It is characterised by migrating desquamative areas on the dorsum and lateral surfaces of the tongue with the desquamated areas devoid of filiform papillae.
Geographical tongue - 2

- The area is circumscribed by white keratotic hypertrophic filiform papillae.
- Lesion appears in childhood and may last for years.
- Occur more in girls
- About 1-2% of the population.
- No treatment is needed.
Fissured tongue

• This is a benign condition also called scrotal tongue.
• It is characterised by numerous shallow and or deep grooves on fissure on the dorsum of the tongue.
• The grooves may differ in size and depth and they radiate outwards giving the tongue a wrinkled appearance.
Fissured tongue - 2

- The lesion may be present at birth but becomes more apparent during childhood.
- The fissures tend to predispose to infection especially fungal.
- It is familiar and inherited in an autosomal dominant fashion.
Hereditary gingival fibromatosis

- It is an hereditary form of generalised gingiva hyperplasia.
- Inherited in an autosomal dominant fashion.
- May be associated with some craniofacial anomaly or in patients with mental retardation.
- No sex predilection for occurrence.
Hereditary gingival fibromatosis - 2

- Lesion becomes apparent when teeth starts to erupt
- There is generalised enlargement of the gingiva.
- This is maximal at puberty.
- The site most commonly affected is the posterior mandible.
Hereditary gingival fibromatosis - 3

- Gingiva appears firm, pink, smooth and uniform.
- No associated pain or haemorrhage.
- No gingival exudate formation.
- There may be delay in tooth eruption and tooth malpositioning affecting the deciduous teeth.
Hereditary gingival fibromatosis - 4

- There is also associated aesthetic problems.
- Treatment of choice is gingivectomy.
- There may however be a recurrence.
Heck’s disease

- Also known as focal epithelial hyperplasia.
- This is quite common in children and seen as small multiple nodules on the oral mucosa.
- Commonly diagnosed in children in Northern Nigeria.
- No treatment is required as it does not cause any symptoms and it disappears on its own.
Soft tissue examination

Examine the following soft tissue intra-orally:

- Inner surfaces of the lips
- Gingiva sulcus
- Attached, marginal and papillary gingiva
- Dorsum and ventral surface of tongue
Examine the following soft tissue intra-orally:

- Frenum
- Cheek
- Salivary duct orifices
- Soft and hard palate
- Tonsils
Quiz 1

Types of dentigerous cysts
• Developmental cysts
• Eruption cysts
• Bohns nodules
• Inclusion cyst of the newborn
Soft tissue tumours:
• 9% of lesions are benign
• 61% are diagnosed between 1-4 years.
• Males and females are more affected.
• 27% occur in the mandible.
Minor apthous ulcer
• Consist of ulcers are about 1-2mm in diameter.
• Found on the attached mucosa
• Usually fewer than five in number
• Often heal within two weeks with scarring.
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• We hereby acknowledge that many of the materials are not primary quotes of the group.

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