Traumatic ulcer :

-Most common cause of oral ulcerations.2nd most common is RAS.

-Present for the first time or of recent onset.

-Source of injury is identified.

-Painful ulceration.

**\*Diagnosis:**

-single, **superficial** ulcer (yellowish ulcer surrounded by erythema).

-Location: according to the aetiology( most common in hard palate and lower lip ).

-if it get infected with oral flora (Staph.aureus and candida albican ) there will be small degree of ipsilateral cervical lymph node enlargement , so you should palpate submental and submandibular areas to exclude any infection .

-chronic irritation may cause hyperplasia or hyperkeratosis of the adjacent mucosa.

**\*Aetiology:**

-Physical ,chemical (aspirin burn: aspirin cause slaving of all mucosa that why it’s appear white).

-Electrical (when there’s gold restoration opposed to silver one ).

-Thermal ( impression materials )

-Fractured, carious, malposed or malformed teeth as well as premature eruption of teeth.

-poorly maintained and ill-fitting dental prosthetic appliances.

-Accidentally biting oneself while talking, sleeping or secondary to mastication.

**\*Treatment:**

* Removal of the irritant or cause.
* Consumption of soft bland diet.
* Use of antiseptic and analgesic mouth washes.
* Application of topical corticosteroid oral gel.
* If the ulceration is accompanied with secondary infection, lymphadenitis and fever, then oral antibiotic therapy is recommended( amoxicillin usually )
* Biopsy is needed if there is any suspicion of malignancy, or if the ulcer does not heal within 2 weeks of removal of the cause .
* Small lesion :excisional biopsy , large lesion: incisional biopsy.

## Eosinophilic ulcer:

-Uncommon benign ulcer, develops suddenly.

-it affects middle-aged to elderly adults.

-slight female predominance.

-60% of reported cases in the lateral and dorsal surface of the tongue, followed by lower lip.

-present as: solitary, painful nonhealing **deep** ulcer ( may cause trauma to muscle and mucosa ).

-Size ranges from few mm to several cm.

- it should be differentiated from neoplastic ulcer.

-with chronic irritation, a reactive hyperplasia of the surrounding epithelium occurs , which appear as a keratosis (raised white border).

\*\*\* this keratosis is not present in a neoplastic ulcer which appear as a crater-like defect with raised rolled border and indurated base.

**\*Aetiology :**

-The cause is unknown in most of the cases.

-sometimes due to sharp teeth or orthodontic appliances ( seen in lateral border of the tongue ).

-or due to crush injury ( seen in the dorsal surface of the tongue ).

- or anesthesia ( seen in lower lip ).

**\*Diagnosis:**

* The lesion is self-limiting.
* It has a characteristic appearance under the microscope ( certain histopathological features ).
* If left untreated, most heal spontaneously within 1 month or more , and this may be accelerated by excisional biopsy.

**\*Treatment:**

* The source of chronic irritation must be eliminated when an eosinophilic ulcer is due to obvious trauma.
* NSAIDs and topical anaesthetic oral rinses (eg lidocaine or dyclonine) may be used to provide temporary relief and comfort when the patient eats.
* Topical corticosteroid (eg triamcinolone oral gel or dexamethasone elixir) is often effective.
* As a rule, if the lesion does not resolve or if it continues to appear after 2 weeks of treatment, excisional biopsy is warranted.
* After biopsy, rapid healing of the ulcer is often typical, and no further treatment is necessary.

## Riga-fede disease:

-it is a form of eosinophilic ulcer ( in histo-pathologyical finding) that develops in infants, and typically is seen in children aged 1 week to 1 year.

- It usually occurs on the anterior ventral surface of the tongue.

**- Aetiology:**

It develops as a result of chronic mucosal trauma from adjacent lower anterior primary teeth, and it usually occurs in association with breastfeeding.

**-Diagnosis :**

The distinctive, self-limiting ulceration heals spontaneously upon removal of the trauma.

**-Treatment** :

* Although extraction of the anterior primary teeth is not recommended, this may resolve the ulceration.
* If the teeth are stable, they should be retained and breastfeeding should be discontinued, or a protective shield should be constructed to prevent any further trauma.
* These measures are usually sufficient to resolve the condition
* .

## Psychiatric ulcer :

\*self-induced ulcer.

**-** Rarely, oral ulceration may be self-induced (stomatitis artefacta) in the same way that some patients deliberately cause skin lesions in dermatitis artefacta.

- It is sometimes difficult to diagnose, and it is uncommon in children.

- It varies and depends on mode of production.

**- Aetiology :**

* Lesions are produced or perpetuated by the patient’s own action.
* External causes include fingernails, sharp instruments, and chemicals.
* Location in anterior buccal mucosa and lower lip.

-**Diagnosis:**

A vague history with **frequent recurrence** of ulcerations in the same area, which is accessible to the patient, delayed healing, non-specific histological features, and healing without scarring usually leads to diagnosis.

-**Treatment :**

Patients with repeated self-induced ulcerations may be considered for referral to a psychiatrist or psychologist.

## Iron deficiency anaemia;

\*Sideropenic or latent anemia : Hb is normal , ferritin is low( at early stage of the disease ).

\* we called a patient anemic ,if **Hb level** is lower than 12g/dl in female and lower than 14 g/dl in male.

**-** It is the most common haematological deficiency, and can result in oral ulceration that resemble apthous ulcer.

- Patients usually present complaining of a red sore tip of tongue, especially when eating hot or spicy food, which is an early sign of iron deficiency.

**-** Clinical examination may not reveal any obvious abnormality; although in long standing cases, loss of the fungiform and filiform papillae ( in the dorsum of the tongue ) produce a smooth surface and a patchy atrophy with thinning of the mucosa which make it more susceptible to superficial ulcers due to trauma. As the deficiency advances, the epithelium becomes eroded , , leaving shallow ulcers resembling aphthae.  **\*\*\* circumvallate papillae and foliate papillae in the back of the tongue**

- Occasionally, in severe cases, large chronic ulcers are seen surrounded by areas of hyperkeratosis, which may resemble carcinoma.

- **Angular cheilitis**( or angular stomatitis ) is common in iron deficiency, and pallor is unreliable, but may occur with low haemoglobin

**-Aetiology :**

* Poor absorption of iron by the body ( malabsorption , as in celiac disease )
* Inadequate daily intake of iron.
* Blood loss due to heavy menstruation or internal bleeding.
* [Pregnancy](http://www.mamashealth.com/pregnancy/).
* Growth spurt ( age 10-14 ).

**- Diagnosis :**

* CBC , serum vit.B12 level , WBC total and differential level,serum and red cell folate level and serum ferritin level should be routinely performed. In iron deficiency anaemia the blood picture is of **hypochromic microcytic.**
* Glossitis due to iron deficiency can occur even before the condition has progressed to anaemia, as measured by the haemoglobin level (sideropenic or latent anaemia).

\* note : red cell folate level is more accurate than serum folate level because red cell folate gives results about the folate level for months and does not depend on daily consumption .

* **Treatment:**
* Analgesic mouth washes for oral ulcers.
* Ferrous sulphate or gluconate iron supplement for 3-6 months ( but ferrous gluconate is more tolerable by stomach than ferrous sulphate )
* Taking [vitamin](http://www.mamashealth.com/oranges.asp)-C aides iron absorption.
* Referral to a haematologist is indicated.

## Plummer-Vinson syndrome:

Also called Paterson-Brown-Kelly syndrome or sideropenic dysphagia.

-present as : dysphagia ( due to esophageal web ), glossitis and iron deficiency anaemia.

-the patient complain of burning sensation of the tongue and oral mucosa, and atrophy of lingual papillae produces a smooth shiny red tongue dorsum.

-women at a high risk than men , middle age.

-esophageal squamous cell carcinoma risk is increased.

**\*Aetiology :**

-unknown.

-genetic factors and nutritional deficiencies.

**\*Diagnosis:**

-serial contrasted gastrointestinal radiography or upper gastrointestinal endoscopy may reveal the web in the esophagus .Biopsy taken of suspicious lesions may show epithelial atypia ( loss of differentiation in single cell ) or dysplasia ( loss of differentiation in large area).

- Blood test show a hypochromic microcytic anaemia .

**\*Treatment:**

-primialy aimed at correcting the iron deficiency anaemia.

-patients with PVS should receive iron supplementation in their diet, which may improve dysphagia and pain.

-if no improvement, then the web can be dilated during upper endoscopy to allow normal swallowing and passage of food.

## Vitamin B12 deficiency;

Clinical presentation is similar to that iron deficiency anaemia , the initial and most differential sign is **red raw beefy tongue** which later regresses as the filiform,fungiform and circumvallate papillae atrophy.

Angular chelitis is un common.

Aetiology :

-Idiopathic.

- secondary to gastric surgery( because of intrinsic factor that help in absorption if vitamin B12) , autoimmune, due to disease of terminal ileum.

**\*Diagnosis:**

CBC,serum vitamin B12 level ,and antiparietal cell antibodies APCA ( autoantibodies against the intrinsic factor in pernicious anaemia ).

-vitamin B12 deficiency results in Megaloblastic macrocyctic anaemia.

-Schilling test may be helpful .

**\*Treatment:**

-Vitamin B12 IM injection of cyanocobalamin 500mg.

-oral vitamin B12 1-2mg daily .

## Folic acid deficiency:

-oral mucosal atrophy is un common,angular chelitis always occur.

-cause slow growth rate in children.

-large and prolonged doses of folic acid can lower the blood concentration of vitamin B12,

-Folic acid never be given alone due to the risk of precipitating subacute combined degeneration of the spinal cord.

-result in megaloblastic macrocytic anaemia.

**\*Aetiology:**

-Malabsorption syndrome like celiac disease ( sensitivity to gluten)

-inadequate dietary intake, pregnancy,cytotoxic drugs and anticonvulsants.

**\*Diagnosis:**

CBC,low serum folate and red cell folate level.

**\*Treatment :**

Folic acid tablets , gluten free diet in case of celiac disease.

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