



Oral Manifestations of Systemic Diseases

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- All the following diseases (disorders) have orofacial manifestations:
 - Cardiovascular diseases.
 - Connective tissue diseases.
 - Endocrine conditions.
 - Gastrointestinal disorders.
 - Haematological disorders.
 - Immunological disorders.
 - Infectious diseases.
 - Liver disorders.

- Metabolic disorders.
- Neurological disorders.
- Psychiatric disorders.
- Renal disorders.
- Respiratory disorders.
- Skeletal disorders.
- Skin diseases.

- Many systemic diseases are reflected in the oral mucosa, maxilla, and mandible.
 - Mucosal changes may include ulceration or mucosal bleeding.
 - Immunodeficiency can lead to opportunistic diseases such as infection and neoplasia.
 - Bone disease can affect the maxilla and mandible.
 - Systemic disease can cause dental and periodontal changes.
 - Drugs prescribed for a systemic disease can affect oral tissue.

- Careful examination of the oral cavity may reveal findings indicative of an underlying systemic condition, and allow for early diagnosis and treatment. Examination should include evaluation for mucosal changes, periodontal inflammation and bleeding, and general condition of the teeth.

- Oral manifestations may be:
 - 1) the first, only or most severe feature of systemic disease.
 - 2) the principle focus of therapy.and/or
 - 3) the dominant cause of a lessening of the affected person's quality of life.

1- Cardiovascular Diseases

- 1- Angina pectoris خناق الصدر: pain referred to lower jaw.
- 2- hypertension ارتفاع الضغط (problems caused by some antihypertensive agents):
 - Dry mouth and/or salivary gland swelling or pain.
 - Gingival swelling(nifedipine)
 - Lichenoid lesions(methyldopa)
 - Angioedema وذمة عرقية.
 - Burning mouth, taste sense alteration (dysgeusia).
 - Paresthesia. – erythema multiforme.

angioedema



Lichenoid lesions



Connective tissue Diseases

- Group of disorders involving the protein rich tissue that supports the organs and tissues.
- Ex; bone, cartilage, fat...
- These disorders often involve the joints, muscles, skin and organs of systems like the eye, heart, lungs, kidneys, blood vessels and gastrointestinal tract.

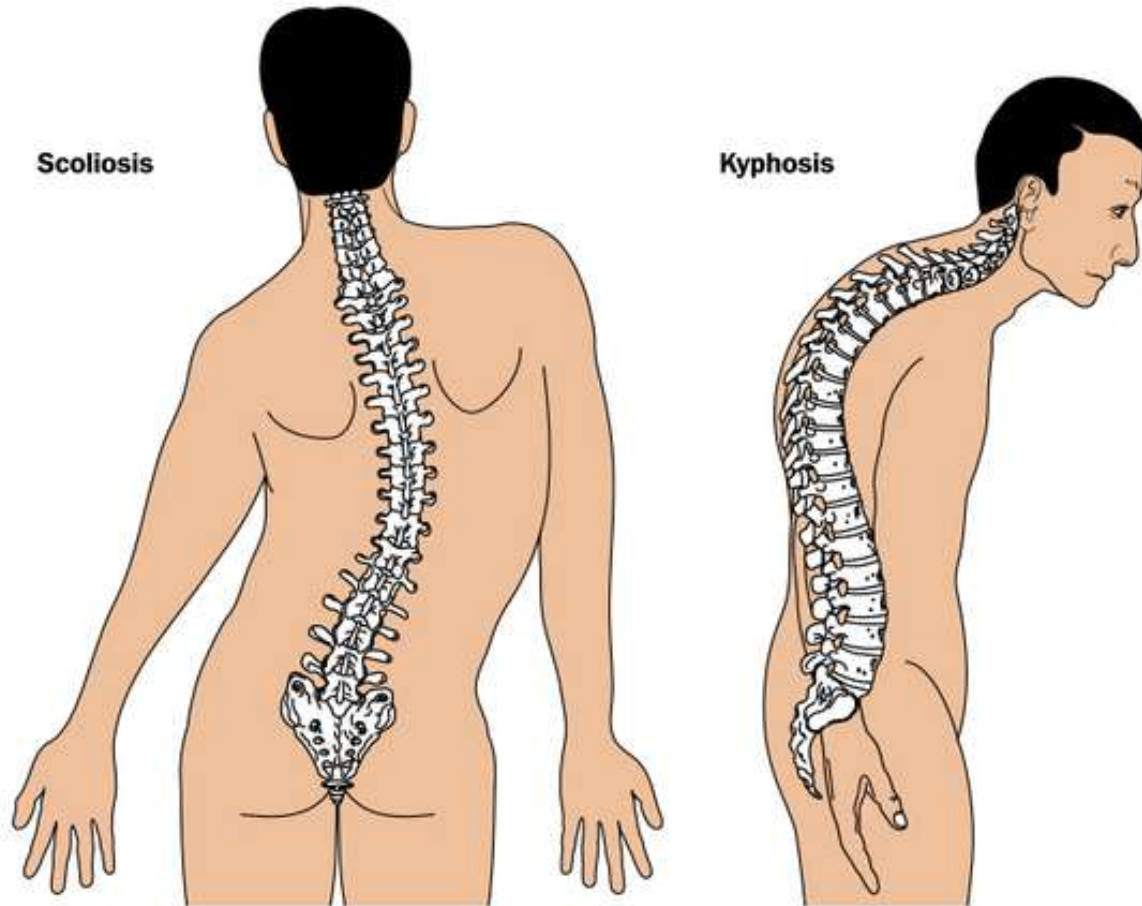
Connective Tissue Disease

- Classified into:
 - 1- inherited disorders of connective tissue.
 - 2- Autoimmune Diseases.

- Ehlers-Danlos Syndrome EDS:

- One of the inherited diseases, characterized by over- flexible joints, stretchy skin and abnormal growth of scar tissue.
- Symptoms range from mild to disabling.
- Other symptoms may include:
 - Curved spine.
 - Weak blood vessels
 - Bleeding gums
 - Problems with lungs ,heart valves, or digestion.

Ehlers-Danlos Syndrome EDS





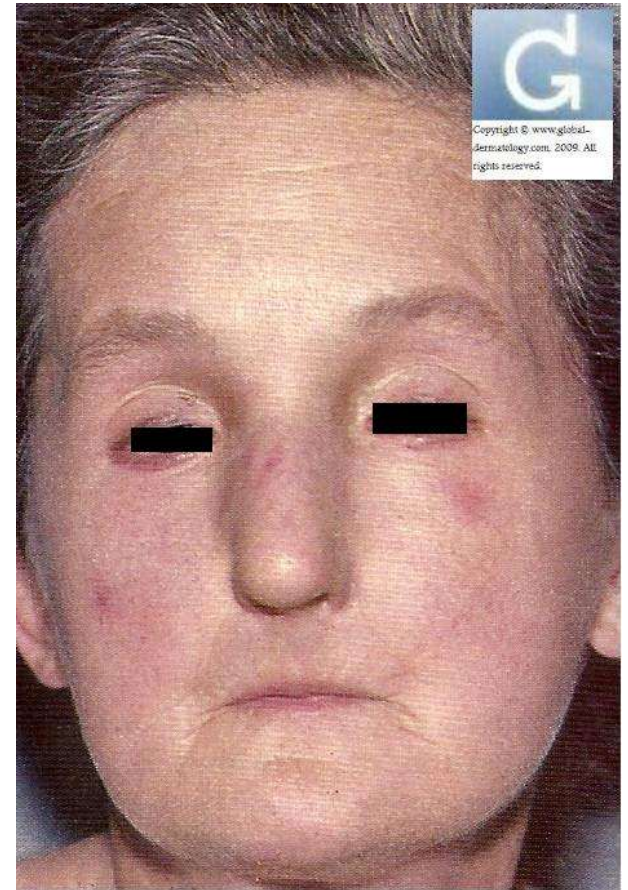
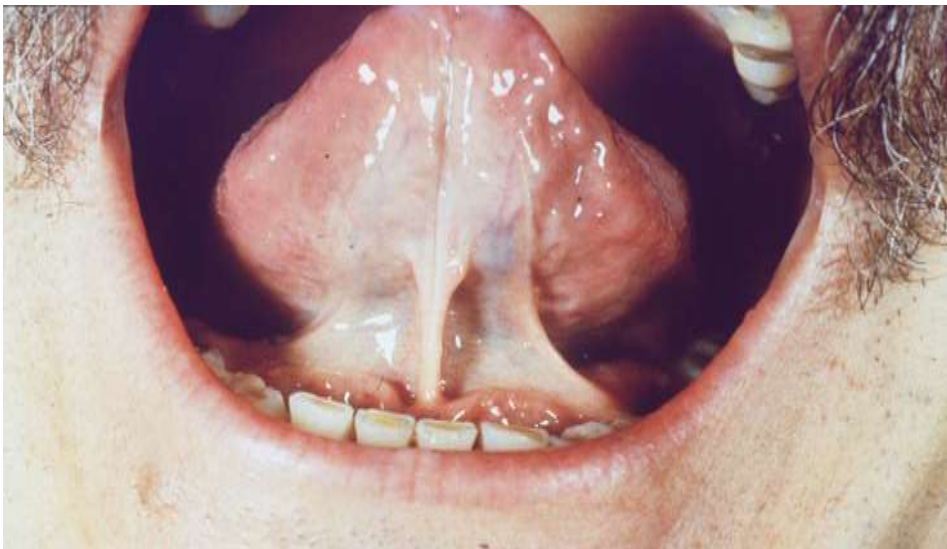
Connective Tissue Disease

- In general any connective tissue disease has the following manifestations:
 - Sjogren syndrome.
 - Lymph node enlargement.
 - Facial sensory loss.

Connective Tissue Disease

- systemic sclerosis:
 - Stiffness of lips, tongue, etc
 - Trismus.
 - Sjogren Syndrome.
 - Periodontal ligament widened.
 - Mandibular resorption.
 - Oral cancer.

Systemic sclerosis manifestations



gastrointestinal disorders

- 1- Peutz-jeghers syndrome(small intestinal polyps) : **melanosis**.
- 2- malabsorption syndrome:
 - ulcers.
 - Glossitis.
 - Angular stomatitis.

Peutz-jeghers syndrome



gastrointestinal disorders

3- Crohn`s disease:

- Facial or lip swelling.
- Gingival hyperplasia.
- Oral Ulcerations.
- Glossitis.
- Angular stomatitis.

Crohn`s disease



haematological disorders

1- haematinic- iron, folic acid or Vit B12 deficiency:

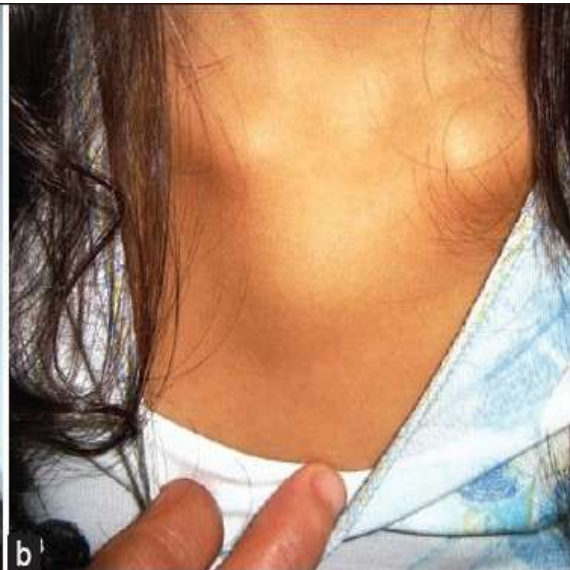
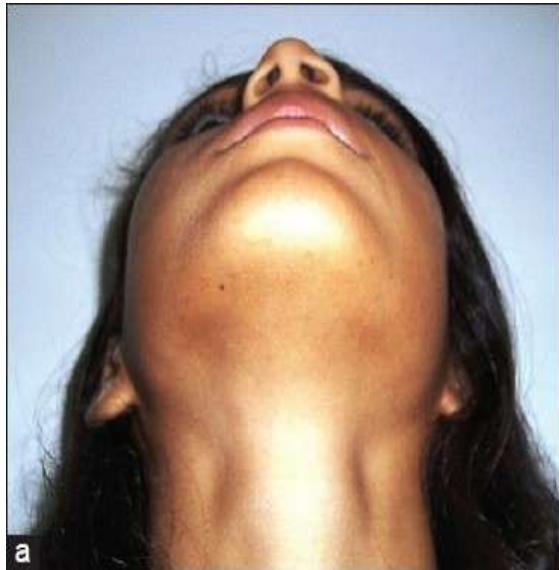
- mucosal pallor
- Burning mouth sensation.
- atrophic glossitis.
- Oral ulcers.
- Angular cheilitis.
- Candidiasis.

haematological disorders

2- **leukaemia:**

- infections.
- Ulcers.
- Bleeding tendency.
- Gingival swelling.
- Cervical lymph node enlargement.
- Labial sensory loss.

leukaemia



haematological disorders

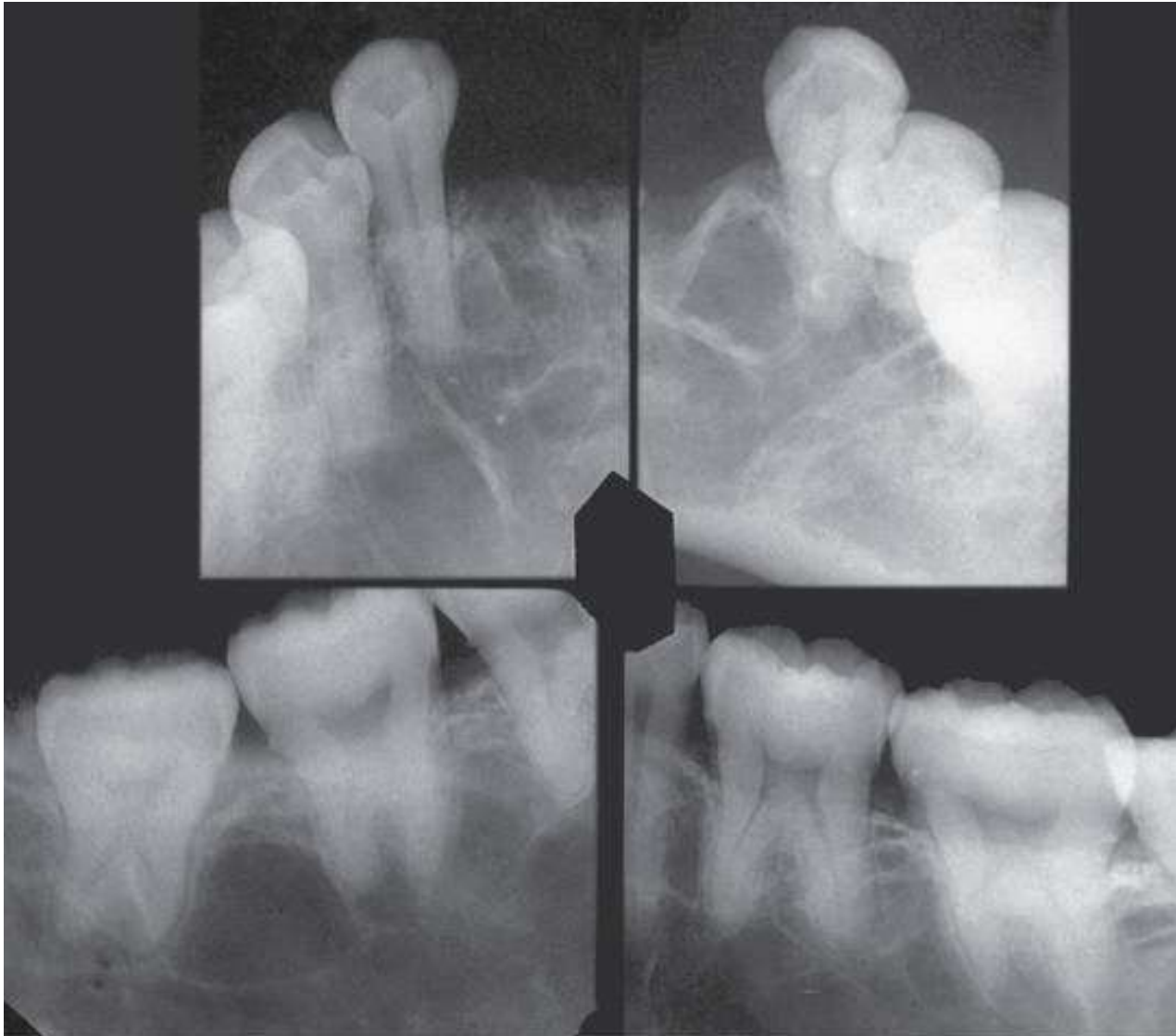
3- sickle cell anaemia:

- Jaw deformities caused by marrow expansion.
- Osteomyelitis (rare).

4- thalassaemia:

- Jaw deformities caused by marrow expansion.

sickle cell anaemia



(Courtesy Dr. Edward V. Zegarelli)

Clinical Features and Oral Manifestations of Thalassemia

- Yellow skin pallor, fever, malaise, and weakness
- The face includes prominent cheekbones, depression of the bridge of the nose, a prominent maxilla, and protrusion of maxillary anterior teeth.
- Radiographs may show a “salt and pepper” pattern.
- Some trabeculae are prominent, and others are blurred.



Thalassemia face



Jaw Deformities in thalassemia patients



haematological disorders

5- severe combined immunodeficiency:

- candidiasis.
- Viral infections.
- Ulcerations.
- Recurrent sinusitis.

immunological disorders

1- **Sarcoidosis:**

- xerostomia.
- Salivary gland swelling.
- Facial palsy.
- Oral swelling.

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infectious diseases

1- candidiasis:

- White lesions.
- Red lesions.
- Angular stomatitis.



FIGURE 5-16 A patient with a history of chronic iron deficiency anemia developed red, raw, and painful areas of the mucosa, diagnosed as acute atrophic candidiasis.



infectious diseases

2- herpes simplex:

- Ulcers in primary infection.
- Gingivitis in primary infection.
- Vesicles on lips in recurrence.
- Lymph node enlargement.
- Facial palsy.
- Erythema multiforme.

herpes simplex



infectious diseases

3- Human herpesvirus-8: Kaposi sarcoma.

4- **syphilis**:

- Mucous patches.
- Ulcers.
- Pain.
- Leukoplakia.
- Lymph node enlargement.
- Hutchinson's teeth in congenital syphilis.

Kaposi Sarcoma



syphilis



syphilis



syphilis



liver disorders

1- chronic active hepatitis: lichen planus.

2- hepatitis C:

- Salivary glands swelling.
- Xerostomia.
- Lichen planus.

3- jaundice:

- Bleeding tendency.
- Jaundice.

Down syndrome:

- Delayed tooth eruption.
- Macroglossia.
- Scrotal tongue.
- Maxillary hypoplasia.
- Anterior open bite.
- Hypodontia.
- Periodontal disease.
- cheilitis.

Down syndrome



neurological disorders

- epilepsy:
- Trauma to teeth, jaws & mucosa.
- Gingival swelling.



psychiatric disorders

1- depression and various psychoses:

- Dry mouth.
- Disturbed taste.
- Disturbed sensation.
- Pain.
- Bruxism.
- Exfoliative cheilitis.

Renal disorders

1- chronic renal failure:

- Uremic stomatitis.
- xerostomia.
- Halitosis/ taste disturbance / burning sensation.
- Leukoplakia.
- Bleeding tendency.

2- dialysis:

- xerostomia.
- Sialadenitis.

Uremic stomatitis

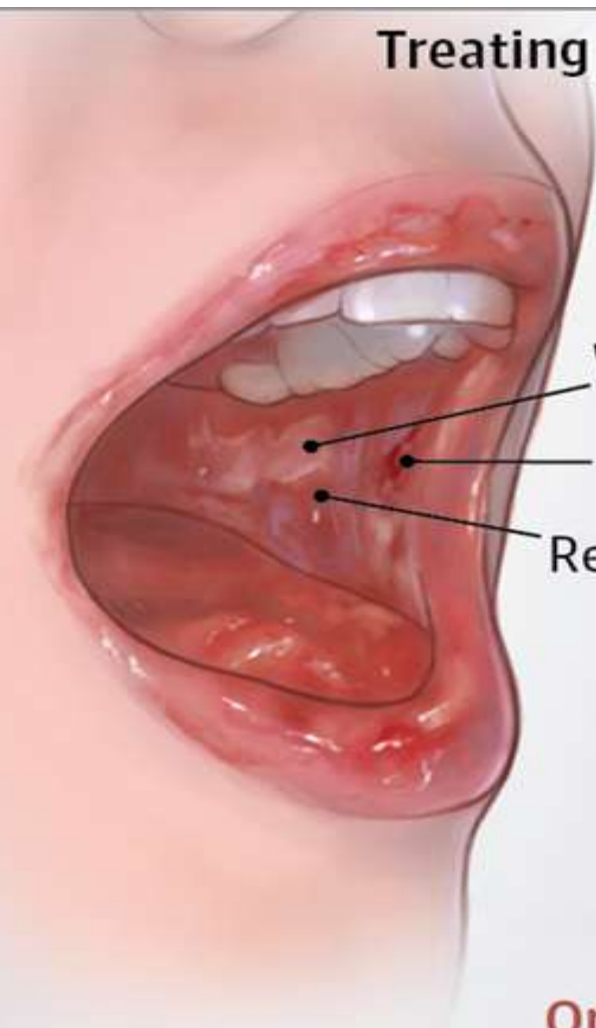


Figure 1 - Adherent white patch on ventral surface of tongue and floor of the mouth.

نمشات وكدمات تحت مخاطية / قصور كلية



Treating mild to moderate oral mucositis



White patches

Ulcer

Redness



Pain control

Suck on ice chips or ice pops.
Use pain medicines as advised
by your doctor.



Dietary modifications

Eat moist or soft foods.
Avoid foods that require a lot of chewing.
Avoid acidic, spicy, salty, and hot foods.

Oral care

Rinse mouth 5-6 times each day.
Brush teeth with a soft toothbrush.



Renal disorders

3- post-renal transplantation:

- Infections particularly herpetic & candidal.
- Bleeding tendency.
- Gingival swelling
- Post-transplantation lymphoproliferative disorders .

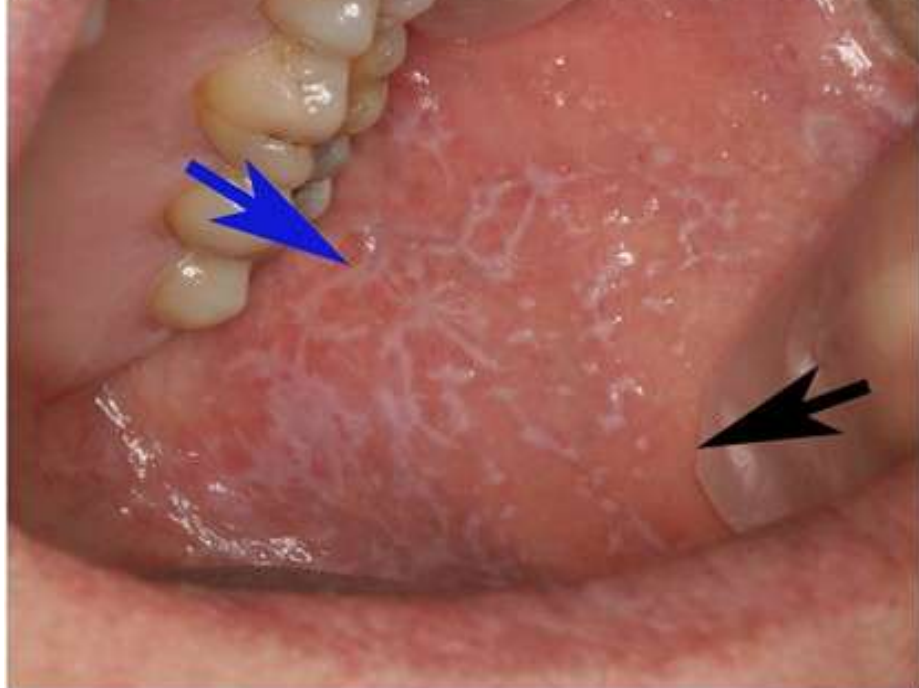
autoinflammatory

1- lichen planus:

- White lesions.
- Red lesions.
- Erosions.
- Desquamative gingivitis.

Lichen Planus

- Erosive: diffuse erythema and painful ulceration with peripheral radiating striae
- In symptomatic patients, oral lesions may be treated with a topical corticosteroid gel or rinse.
- Reticular: white lacy striae, especially on bilateral buccal mucosa





lichen planus

Figure 1.

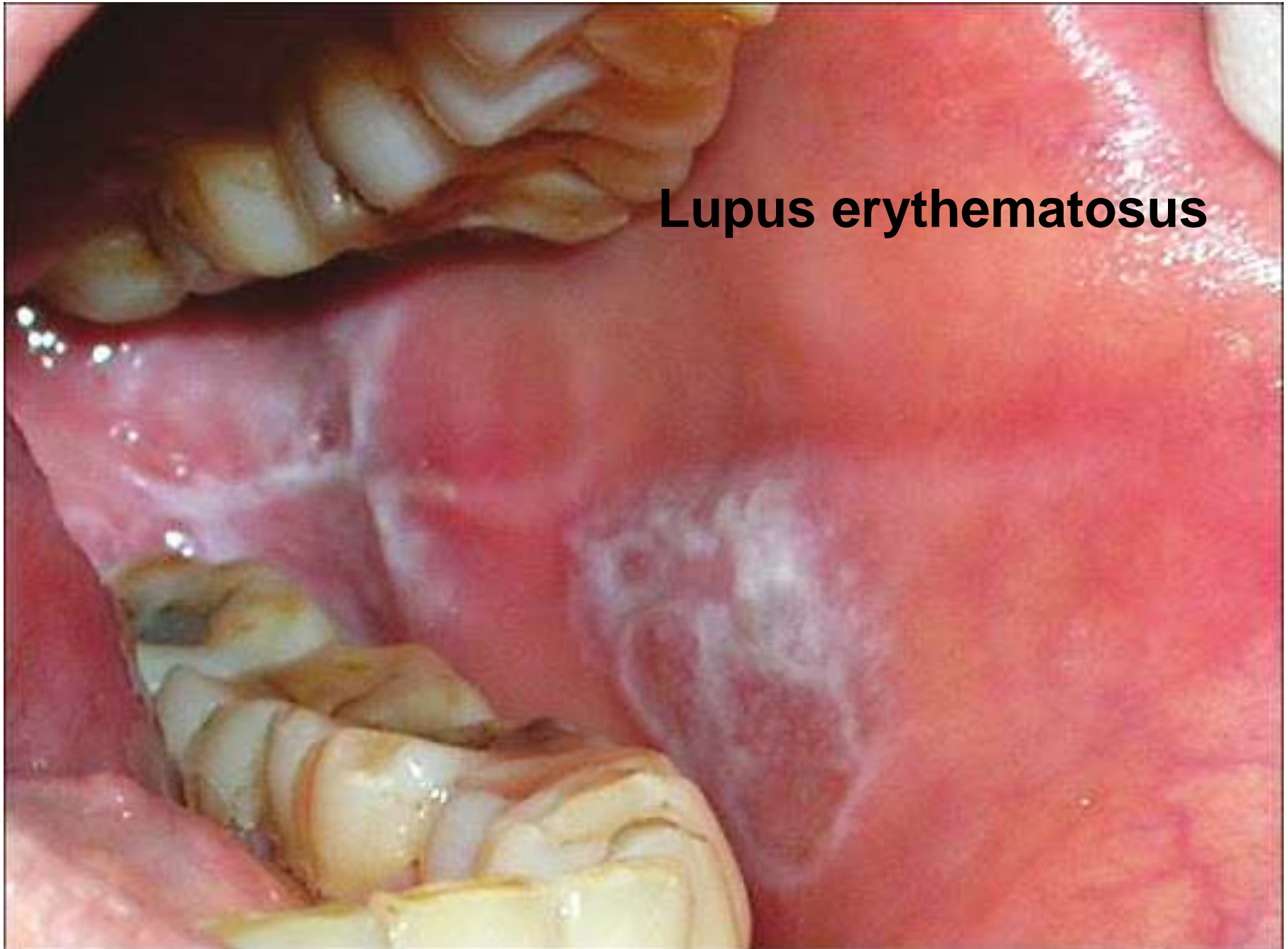


Clinical photograph of oral lichen planus on the buccal mucosa. Lesions were bilaterally symmetrical. Note the white, reticulated striae of Wickham.

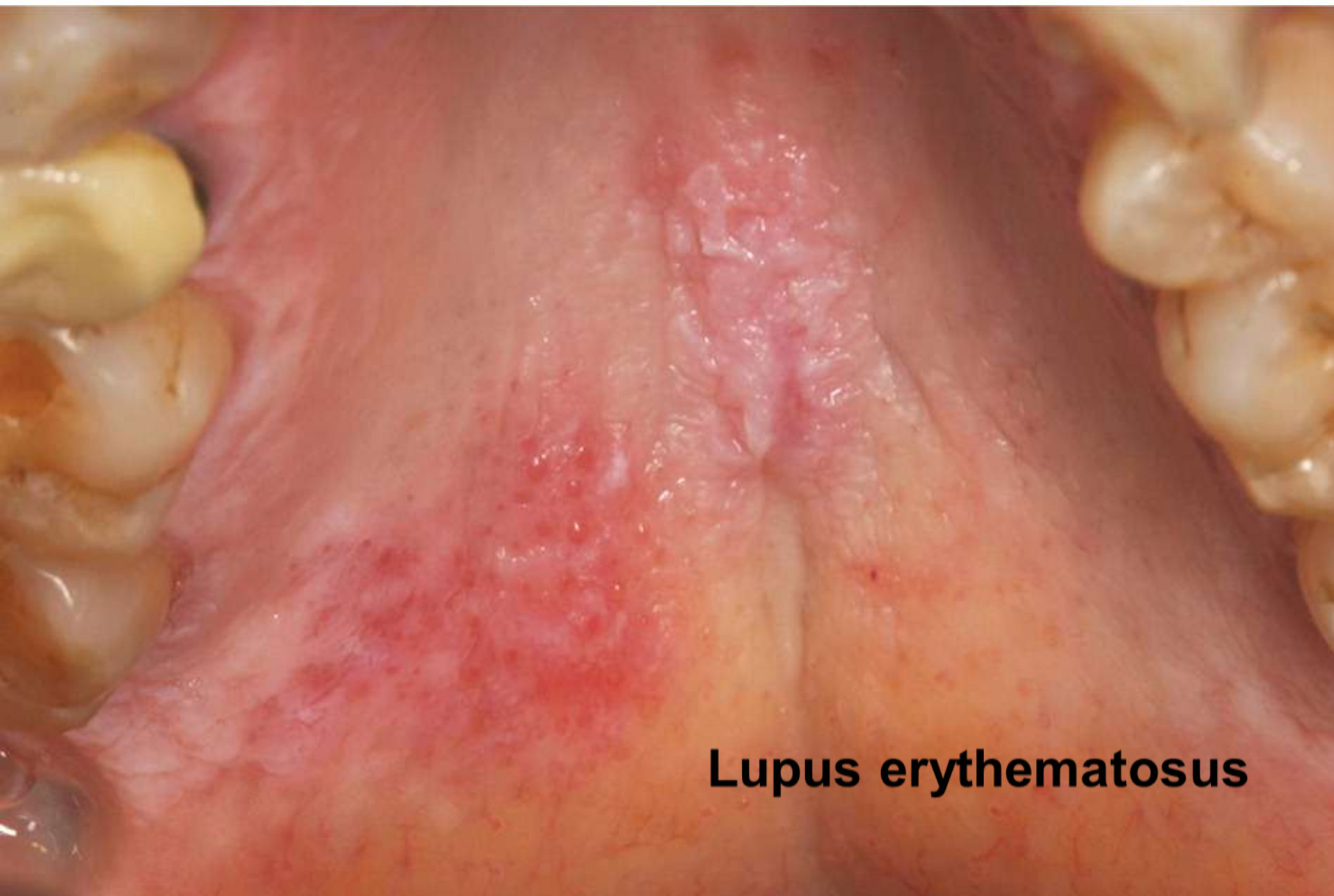


Lupus erythematosus

- Oral discoid lesions, honeycomb plaques, raised keratotic plaques, erythema, purpura, petechiae, irregularly shaped ulcers, cheilitis
- In discoid lupus erythematosus, oral lesions seldom occur in the absence of skin lesions



Lupus erythematosus



Lupus erythematosus

skin diseases

2- pimphigoid & pimphigus :

- blisters.
- Ulcerative ,erosive or white lesions .
- Swelling and erythema.
- Desquamative gingivitis.

3- psoriasis:

- White lesions.
- Lesions like erythema migrans.
- Fissured tongue

- **Benign mucus membrane pemphigoid:**
- Diffuse and painful oral ulceration & scarring.
- Intact blister formation occasionally may be seen intraorally (before rupture and ulceration)
- **Pemphigus vulgaris:**
- Diffuse and painful oral ulceration, positive Nikolsky sign
- Oral lesions often are the first manifestation of disease and may precede the onset of skin lesions.

Pimphigoid & pimphigus



psoriasis

