Nebraska Dental Association | ADA

ULCERATIVE CONDITIONS

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Conflicts of interest & disclaimers

- Conflict of interest: None
- The opinions expressed in this presentation are those of the speaker and not those of my lab.
- The opinions expressed in this course should not be construed as advice to care for specific patients.

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Course objectives

- Upon completion of this course, you will be able to:
  - Recognize ulcerative conditions of the oral cavity
  - Determine a differential diagnosis for ulcerative lesions
  - Discuss appropriate treatment and follow-up measures for patients with oral ulcerations

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ULCERATIVE CONDITIONS

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Differential diagnosis

- The differential diagnosis for chronic ulcerative conditions includes:
  - Erosive lichen planus
  - Mucous membrane pemphigoid
  - Pemphigus vulgaris

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Lichen planus

- Lichen planus is a common, chronic dermatologic disease that can affect the oral mucosa
- Approximately 1% of the population is affected
- May be a reaction to medications, amalgam, etc. – this is better known as "lichenoid mucositis"
  - Patients with suspected lichen planus need a thorough drug history to exclude this as the real diagnosis

Neville B, Damm D, Allen C, et al. Oral and Maxillofacial Pathology: Fourth edition. Elsevier, Inc.: St. Louis, Missouri. Pp 729-734.
Alrashdan MS, Cirillo N, and McCullough M. Oral lichen planus: a literature review and update. *Arch Dermatol Res*. 2016:308:539-551

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Lichen planus

- Patients are middle-aged adults
- Females are more commonly affected than males
- Cutaneous lesions classically present as purple, pruritic, polygonal papules that affect the extremities
- Skin lesions itch, but the patient will not usually scratch them because they will hurt

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Lichen planus

- The skin papules will also have a thin, lacelike network of white lines surfacing them – termed **Wickham striae**
- Other possible extraoral sites of involvement include glans penis, vulvar mucosa, and nails

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Lichen planus

- Oral mucosal lesions are typically multiple and nearly always have a bilateral and symmetrical distribution
- The most common sites of involvement is the buccal mucosa

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Lichen planus

- There are several different clinical presentations of oral lichen planus; patients may have more than one clinical form at the same time
- Subtypes and frequency:
  - Reticular - 92%
  - Atrophic - 44%
  - Plaque-like - 36%
  - Papular - 11%
  - Ulcerative - 9%
  - Bullous - 1%
- The plaque-like and papular forms are usually included under the umbrella of reticular oral lichen planus
- The atrophic and bullous forms are usually included in erosive lichen planus

Ion DI and Setterfield JF. Oral lichen planus. *Prim. Dent. J.* 2016;5(1):40-44.

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Lichen planus - reticular

- The reticular form is the most common
- It is usually asymptomatic
- Presents as white, linear, lace-like lines (Wickham striae)
  - Post-inflammatory melanosis is common, especially in patients of color
- This form is most commonly noted on the buccal mucosa bilaterally; lesions also occur on the lips, tongue, or gingiva

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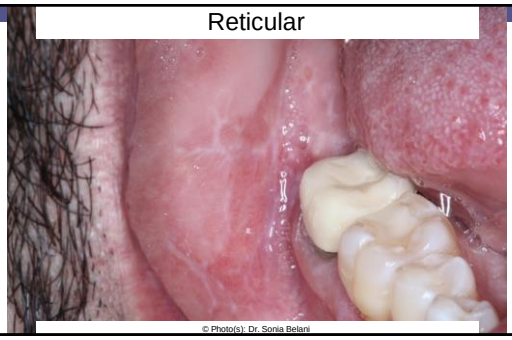
Reticular



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Lichen planus - papular

- The papular form presents as small, white, raised areas which are approximately 2 mm in greatest diameter
- They are most frequently noted on the dorsum of the tongue

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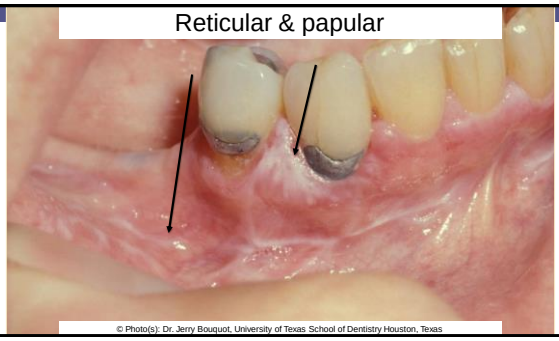
Reticular & papular



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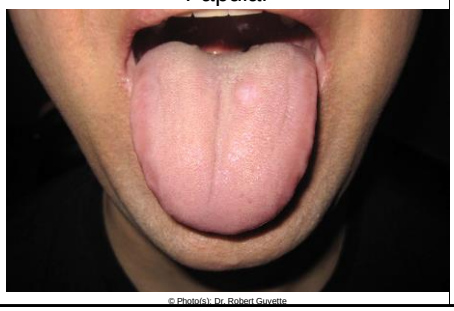
Papular



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Lichen planus – plaque-like

- Plaque-like oral lichen planus presents as thicker, more homogenous white lesions
- They are also present on the buccal mucosa and dorsal tongue
- Plaque-like lesions have been reported to occur more often in patients who smoke

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Lichen planus - atrophic

- The atrophic form presents with white patches that have central areas of mucosa atrophy
- Clinically, these lesions present as erythroleukoplakia
- These patients are usually symptomatic

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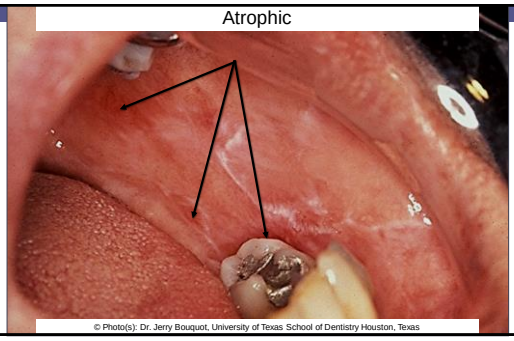
Atrophic



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Lichen planus – ulcerative

- The ulcerative form of lichen planus may develop in reticular regions, atrophic regions, or de novo
- Most commonly, the ulceration will be located centrally in erythematous, atrophic areas; the periphery is usually bordered by Wickham striae
  - Occasionally, only ulcerative lesions without any white areas are present
- Patients complain of soreness, especially when eating spicy or acidic foods

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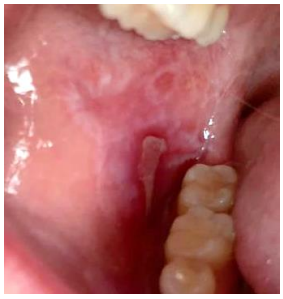
Ulcerative form



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Lichen planus - bullous

- Bullous oral lichen planus is rare
- It presents as small vesicles or blisters which may be indistinguishable from other vesiculobullous conditions

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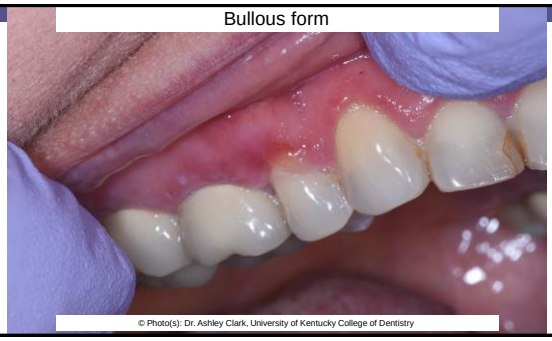
Bullous form



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Lichen planus

- Reticular lichen planus can usually be diagnosed clinically
- If lesions are symptomatic, immobile, or unilateral, biopsy is required for definitive diagnosis
- Take two separate biopsies of lesional, but not ulcerated, tissue
  - One specimen should be placed in formalin for routine light microscopy
  - The other specimen should be placed in a transport medium such as Michel solution for direct immunofluorescent (DIF) studies
  - The DIF is helpful for distinguishing lichen planus from other, more rare conditions such as chronic ulcerative stomatitis or lupus erythematous, which will present with similar histopathologic findings under light microscopy

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Lichen planus

- Reticular lichen planus only requires yearly evaluations
- Topical corticosteroids are the best treatment
- Options include:
  - Midpotency: triamcinolone
  - Potent: fluocinonide
  - Superpotent: clobetasol
  - I use clobetasol propionate 0.05% gel, 15g tube, apply sparingly up to three times per day as necessary for pain
- The lesions should resolve in 2 weeks
- The lesions will recur; the same treatment is used

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Lichen planus

- For cases not responding to steroids, I prescribe a topical
  - Tacrolimus has been associated with increased incidence of lymphoma or other malignancies when used extraorally
- For cases that do not respond to corticosteroids or tacrolimus, referral to a dermatologist is suggested so he or she can prescribe different agents
  - These agents carry more serious side effects and require close monitoring
  - Examples: azathioprine, mycophenolate mofetil, and methotrexate

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Lichen planus

- Malignant potential
  - "The World Health Organization (WHO) classifies OLP as a potentially malignant condition, and patients who are diagnosed with OLP should be informed of the low risk of cancer development."
  - I recall my patients at <u>least</u> yearly for examination
  - Re-biopsies may be necessary

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Lichen planus

- In my patient population, I warn the patients that skin and/or genital lesions might occur
- I warn of the anecdotal triggers of stress, trauma, and yeast

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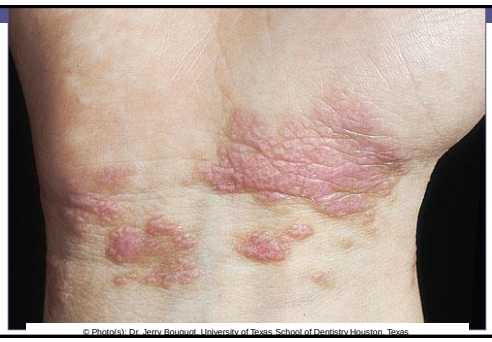

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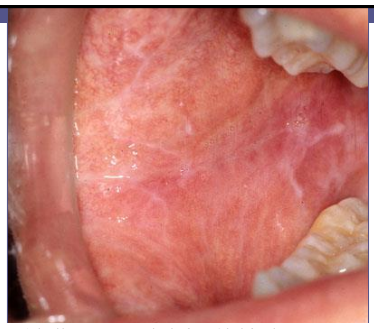

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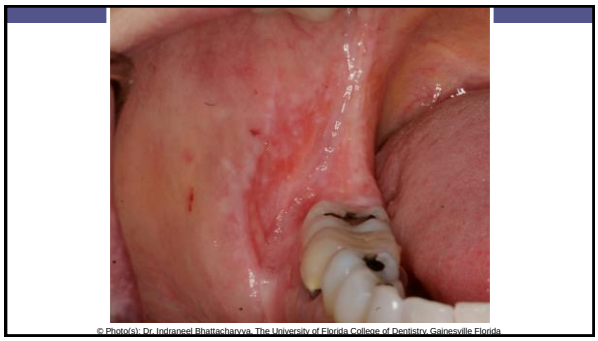

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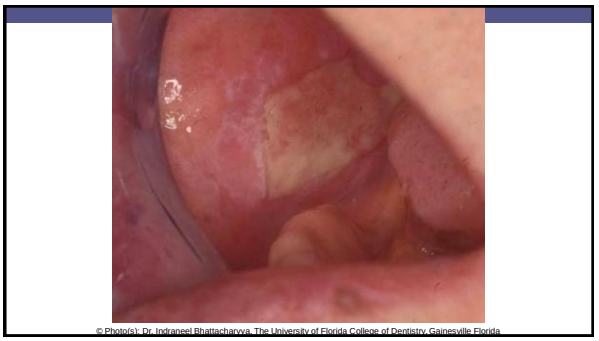

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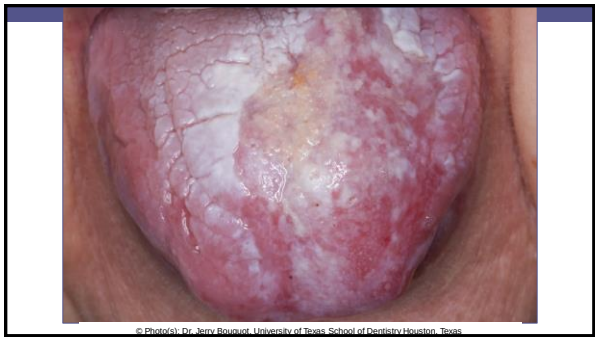

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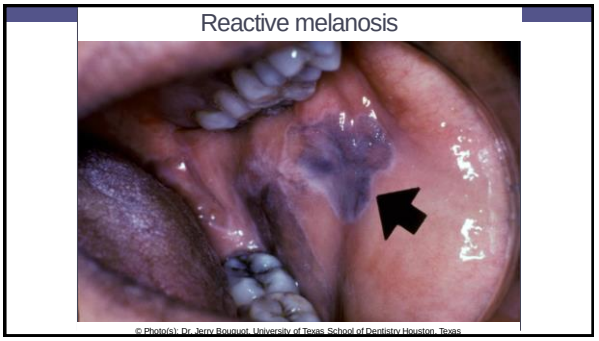

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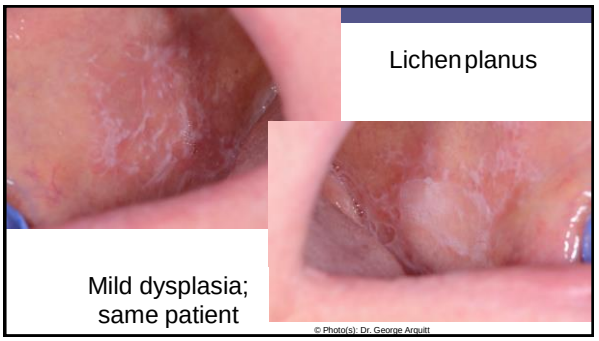

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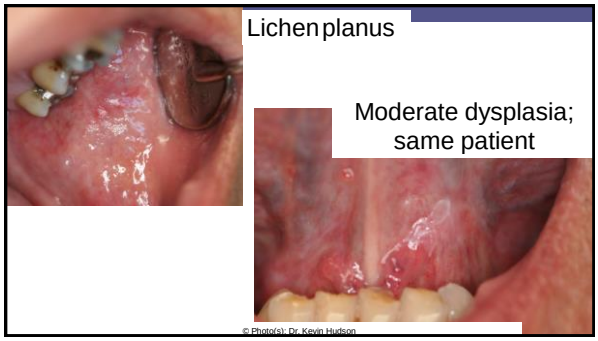

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Mucous membrane pemphigoid

- Mucous membrane pemphigoid (MMP) is a group of chronic, blistering, mucocutaneous conditions in which antibodies are directed against the basement membrane
- Termed pemphigoid due to its resemblance to pemphigus
- Another name for the condition is cicatricial pemphigoid
  - Cicatrix means scar
  - Lesions affecting the conjunctival mucosa will scar and lead to blindness, which is the most significant aspect of this disorder

Neville B, Damm D, Allen C, et al. Oral and Maxillofacial Pathology. Fourth edition. Elsevier, Inc.: St. Louis, Missouri. Pp 718-723.

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Mucous membrane pemphigoid

- Disease of adults; average age of onset is around 60
- Incidence is unknown; estimated 1-2 per million
- Females are affected twice as often as males
- Oral mucosa is the most commonly involved site (85%)
  - Lesions begin as vesicles or bullae which may remain intact
    - Blood blisters of the oral mucosa are highly suggestive of MMP
  - The vesicles rupture and leave areas of ulcerated or denuded mucosa
  - These ulcerations are painful and can persist for months without treatment
  - Any oral mucosal surface can be affected, but the gingiva is the most common site of involvement

Hong-Hui X, Werth VP, Parisi E, et al. Mucous Membrane Pemphigoid. *Dent Clin N Am*. 2013;57:611–630.
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Mucous membrane pemphigoid

- The most serious aspect of this disease are the ocular lesions, which affect anywhere from 25%-65% of patients
- The first manifestation is subconjunctival fibrosis, which can be detected by an ophthalmologist using slit-lamp examination
- With more advanced lesions, the conjunctiva become inflamed and eroded
- Without treatment, scarring and adhesions (termed symblepharons) can cause the eyelids to turn inward, causing the eyelashes to rub against the cornea

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Mucous membrane pemphigoid

- In an attempt at protection, the cornea produces keratin (which is opaque and not removable); this is one way patients become blind
- Scarring closes the opening of the lacrimal glands, which causes extremely dry eyes
- In extreme cases, the eyelids scar together – this is another way patients become blind
- Females may experience pain due to vaginal lesions

Neville B, Damm D, Allen C, et al. Oral and Maxillofacial Pathology. Fourth edition. Elsevier, Inc.. St. Louis, Missouri. Pp 718-723.

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Mucous membrane pemphigoid

- If pemphigoid is suspected, two biopsies should be obtained from perilesional tissue
  - One specimen should be placed in formalin for routine light microscopy
  - The other specimen should be placed in a transport medium such as Michel solution for direct immunofluorescent (DIF) studies
- In order to be diagnostic, the connective tissue must have overlying, intact epithelium (lesional, ulcerated tissue will not have epithelium)
  - This is challenging because the epithelium tends to separate easily from the underlying connective tissue
  - This is why taking two pieces rather than taking one large section and cutting it in half is the preferred technique

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Mucous membrane pemphigoid

- Once diagnosis is established, the patient should be referred to an ophthalmologist
  - This referral should be made regardless if the patient is having ocular complains
  - If the patient has lesions at other sites, the patient should be referred to the appropriate specialist
- The primary goal for treatment is to prevent blindness

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Mucous membrane pemphigoid

- Treatment varies with each patient
  - If only oral lesions are present, powerful topical steroids can be used
- Tacrolimus can be used if the patient is not responsive
- If patients require systemic medications, I refer to a dermatologist (or ophthalmologist will prescribe them if the patient has ocular lesions)
  - Treatments include dapsone, systemic corticosteroids, azathioprine, methotrexate, mycophenolate mofetil, and etcetera.

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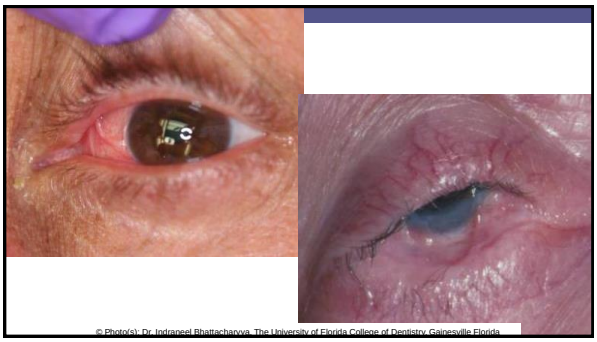

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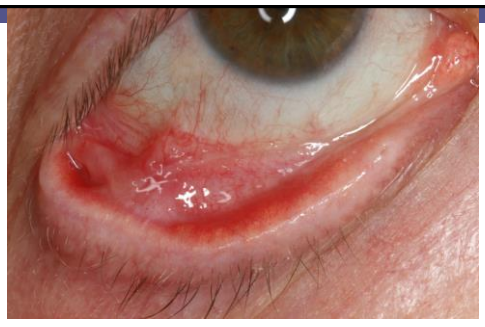

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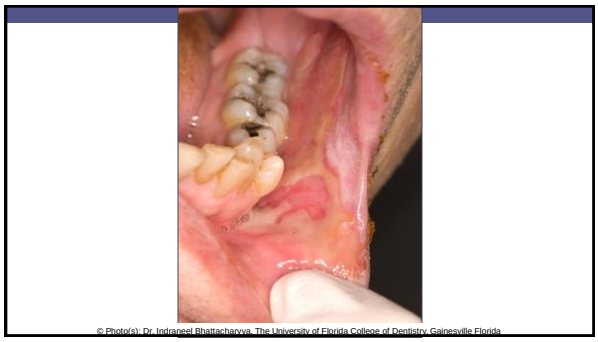

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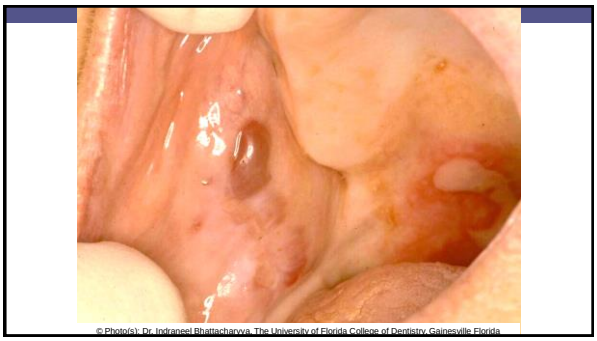

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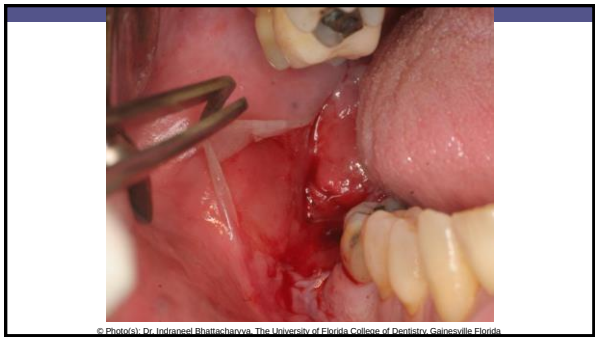

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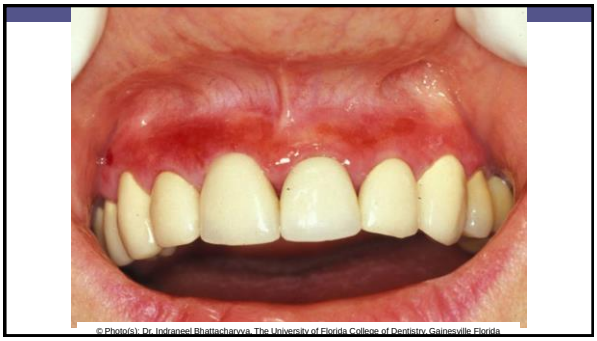

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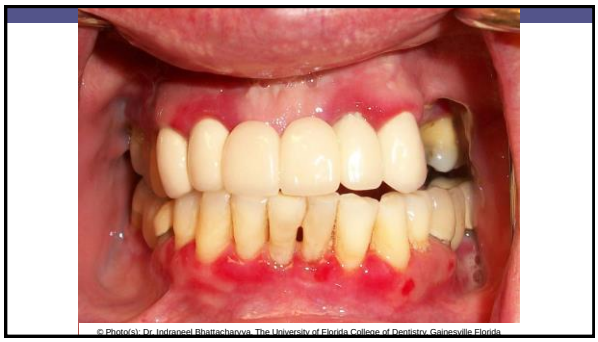

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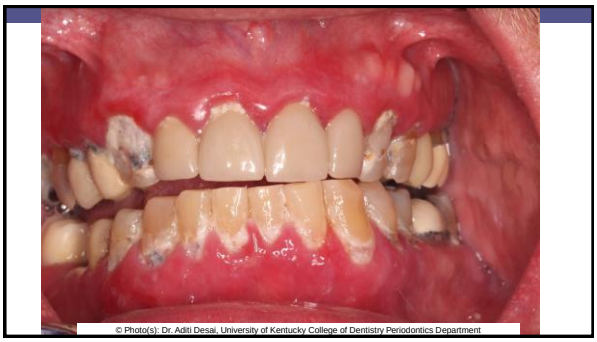

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Pemphigus vulgaris

- Seen in 1-5 per million people
- If untreated, patients will succumb to disease
- Average age of onset is 50 years old; no sex predilection
- The oral lesions are the “first to show, last to go”
  - Over 50% will have oral lesions for up to a year before cutaneous lesions (and close to 100% develop oral lesions eventually)
  - Oral lesions are very difficult to resolve
- Examination shows superficial erosions throughout the oral mucosa without intact vesicles

Neville B, Damm D, Allen C, et al. Oral and Maxillofacial Pathology. Fourth edition. Elsevier, Inc.: St. Louis, Missouri. Pp 712-716.

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Pemphigus vulgaris

- The cutaneous lesions are flaccid vesicles or bullae which rupture quickly to leave a denuded surface
  - Patients will have a positive Nikolsky sign, which means a bullae can be induced on normal-appearing skin after applying lateral pressure
- Ocular lesions can occur, but scarring is uncommon
- Without proper treatment, the oral and cutaneous lesions are progressive
  - Before corticosteroid therapy was developed, patients succumbed to infections or electrolyte imbalances

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Pemphigus vulgaris

- If pemphigus is suspected, two biopsies should be obtained from perilesional tissue
  - One specimen should be placed in formalin for routine light microscopy
  - The other specimen should be placed in a transport medium such as Michel solution for direct immunofluorescent (DIF) studies
- In order to be diagnostic, the connective tissue must have overlying, intact epithelium (lesional, ulcerated tissue will not have epithelium)
  - This is challenging because the epithelium tends to separate easily from the underlying connective tissue
  - This is why taking two pieces rather than taking one large section and cutting it in half is the preferred technique

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Pemphigus vulgaris

- Treatment:
  - Refer to dermatologist – these patients require systemic corticosteroids in combination with other steroid-sparing agents
  - Patients will be placed on high doses of systemic corticosteroids when first diagnosed in an attempt to clear the lesions; then patients will be placed on as low of a dose as possible to control the disease
  - Up to 30% will experience disease remission after 10 years
  - Up to 10% of these patients succumb to complications of long-term systemic corticosteroid use

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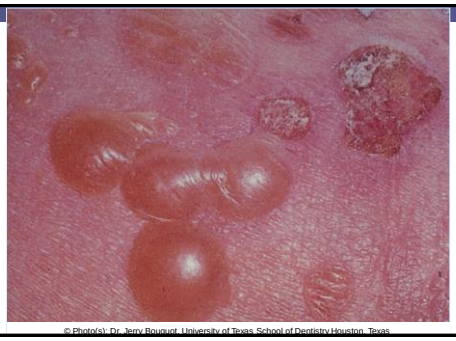

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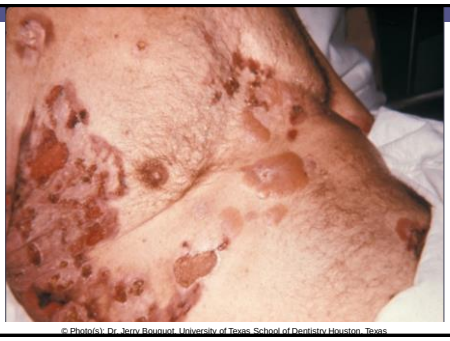

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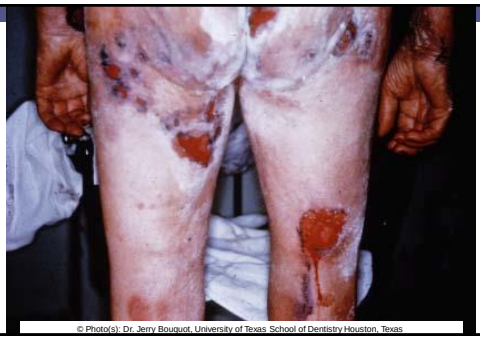

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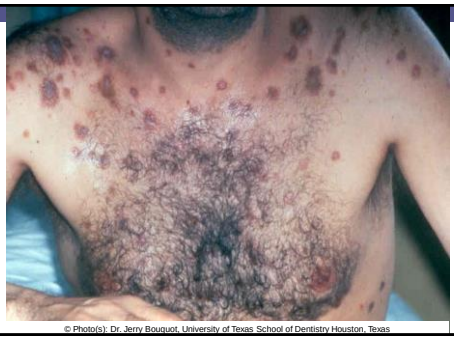

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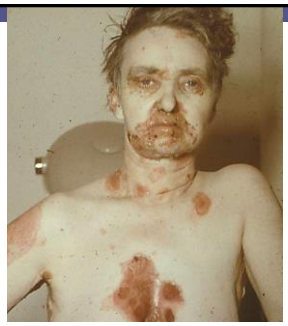

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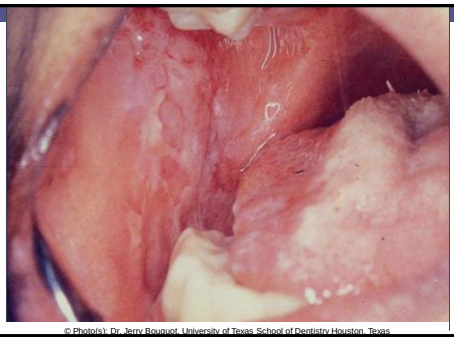

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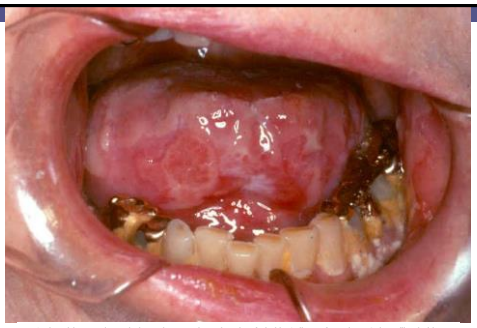

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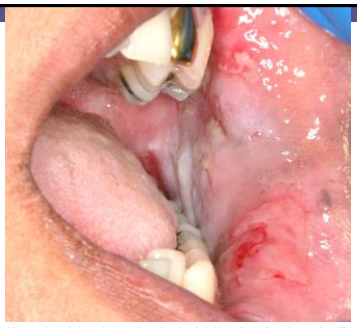

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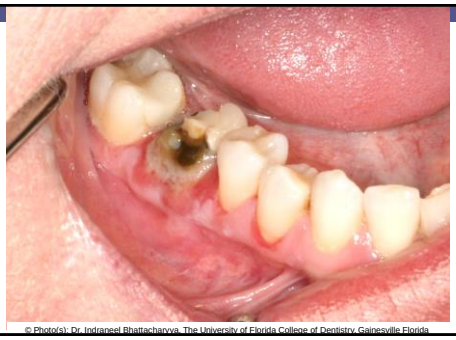

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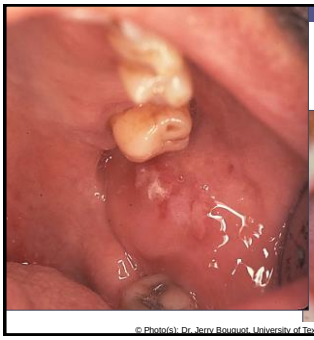
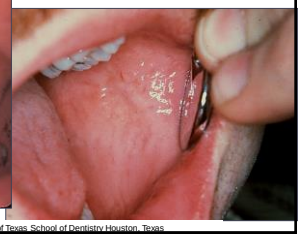


After 60 mg prednisolone daily for 1 week



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Takeaways

- If you suspect lichen planus, pemphigoid, or pemphigus – diagnose before treating!
  - Do not give steroids before biopsy (DIF will be false -)
  - Each condition has different systemic ramifications
- Once diagnosed, all are typically treated effectively with powerful topical steroids
- Patients with lichen planus may get genital lesions – may require referral to gynecologist
- Patients with pemphigoid MUST be seen by an ophthalmologist, regardless of clinically visible ocular lesions; they may also require referral to gynecologist
- Patients with pemphigus MUST be seen by a dermatologist

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CONCLUSIONS & QUESTIONS

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