Sores, Rashes, Lumps and Bumps: Diagnosis and Management

1. Introduction to Differential Diagnosis of Common Oral Lesions/Conditions
   - First Step: Lesion description
   - Consider types of tissue and processes involved vs. pattern matching
   - Differential Diagnosis according to lesion description
   - Modifying factors- demographics, signs and symptoms, history of chief concern, medical, dental and social history including medications and dental products
   - Order tests and interpret results, including biopsy
   - When to refer? Who?

2. Review of Common Lesions and their Treatment/Management
   a. Infections
      - Candidiasis
      - Herpes Simplex
      - Papilloma
   b. Inflammatory Conditions
      - Aphthous stomatitis
      - Lichen planus and lichenoid mucositis
      - Mucous membrane pemphigoid
      - Pemphigus vulgaris
      - Contact allergy stomatitis
      - Adverse effects of dental products
      - Geographic Tongue
   c. Neoplastic/Reactive Processes
      - Fibroma
      - Leukoplakia
      - Peripheral giant cell granuloma
      - Peripheral ossifying fibroma
      - Pyogenic granuloma
      - Hemangioma
      - Melanosis
      - Melanoma
   d. Salivary Gland Hypofunction and Xerostomia

3. Differential Diagnosis according to primary features- Cases!

4. Therapeutics –Sample Prescriptions and Protocols

Disclaimer: These prescriptions should only be provided after comprehensive assessment of the patient and in consideration of their systemic health and medications. If the dentist has not received training /or experience in using these medications, they should consult with an oral medicine specialist, oral surgeon or other healthcare provider experienced with the use of these medications.
NOTES

Candidiasis

Herpes Simplex

Papilloma

Aphthous Stomatitis

Lichen Planus and Lichenoid Stomatitis

Mucous Membrane Pemphigoid

Pemphigus vulgaris

Contact Allergy Stomatitis

Adverse Effects of Dental Products

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Fibroma

Peripheral giant cell granuloma

Peripheral ossifying fibroma

Pyogenic granuloma

Hemangioma

Melanoma

Xerostomia
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THERAPEUTICS FOR ORAL LESIONS
SAMPLE PRESCRIPTIONS and PROTOCOLS

Take oral photographs of the affected tissues before treatment and at subsequent appointments. These can be used to document response to treatment, and to consult with Oral Medicine/Oral Pathology or Oral Surgery as needed.

1. Suspected Oral Lichen Planus/Lichenoid Mucositis

Reticular form—usually asymptomatic, clinical diagnosis
- Consider biopsy to establish the diagnosis.
- No treatment is indicated

Erosive/Atrophic form—often symptomatic
- Biopsy to establish the diagnosis; or refer to Oral Surgeon or Periodontist for biopsy
- Differential diagnosis includes mucous membrane pemphigoid and oral pemphigus, so consider including one sample for routine histopathological examination (store in formalin), and one for direct immunofluorescence (DIF) stored in Michel’s solution or Zeuss solution. Contact the Oral Pathology Biopsy Service or Commercial Diagnostic Lab for these materials.
- Please note, the tissue for DIF must have intact epithelium or the test will not be diagnostic. Do not biopsy an ulcer without surrounding border of tissue with epithelium for routine histopathologic examination
- First line Treatment—Topical Corticosteroids

Fluocinonide gel 0.05%
Disp: 30 gram tube
Apply to affected areas as a thin film on gauze; hold in place for 5 minutes then remove; repeat 4-5 times per day for up to two weeks; to be re-evaluated after 2 weeks

For lesions limited to the gingiva, consider applying medication as a thin film in a custom carrier (made with soft mouthguard material, or fluoride tray material, extended onto gingiva) Then the medication can be applied in the custom carrier twice a day for 5 minutes. Do not use for more than 2 months. Refer to specialist.

OR, for widespread lesions, including lesions in hard to reach areas, consider oral rinse:

Dexamethasone elixir 0.05 mg/5 ml
Disp: 300 ml
Sig: Swish with 5ml and hold in mouth for two minutes then spit. Repeat four times per day for up to two weeks; to be re-evaluated after 2 weeks.

At re-evaluation visit, may decide to extend treatment for another two week, then stop. OR stop and start maintenance regimen, for example, use the medication as directed for two days every week; OR discontinue and start again as needed, following the same directions. Do not use for more than 2 months. Refer to specialist.

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• For all patients, discontinue regular toothpaste and switch to children’s toothpaste or a dry mouth toothpaste- non-irritating. A dental cream which contains CPP-ACFP, is often well tolerated, and provides fluoride for caries prevention, if the patient has dry mouth.
• For a patient who wants/needs to use mouthwash, switch to non-alcohol mouthwash
• All patients with oral mucosal lesions should also be assessed for dry mouth/hyposalivation.
  o Ask the patient if the mouth feels dry.
  o Measure whole stimulated saliva flow by asking the patient to chew paraffin wax for 2 minutes and spit into a medicine cup (with ml markings). Whole stimulated flow less than 1 ml/minute should be considered sign of salivary gland hypofunction
• Results are greatly improved if the dry mouth is also managed at the same time. (we need normal saliva flow to heal oral mucosa) See the protocol for xerostomia/salivary gland hypofunction

Systemic corticosteroids
Prednisone 10 mg
Disp: 46 tabs
Take 50 mg in the morning for three days, then decrease dose by 10 mg every three days until finished. E.g. 50,50,50, 40,40,40,30,30,30, 20,20,20,10,10,10,0,10,0 This will take 18 days to finish.
Do not stop taking this medication suddenly.
Consider providing calcium supplementation

Switch to topical corticosteroids if some lesions incompletely healed.
Caution with patients with diabetes, hypertension, GI conditions- Consult with patient’s MD to manage side effects.

2. Known oral mucous membrane pemphigoid (cicatricial pemphigoid)

If other mucosal sites (ocular, genital, gut, nasal) involved, refer to Dermatology.

If oral involvement only
First line Treatment- Topical Corticosteroids

Fluocinonide gel 0.05%
Disp: 30 gram tube
Apply to affected areas as a thin film on gauze; hold in place for 5 minutes then remove; repeat 4-5 times per day for up to two weeks; to be re-evaluated after 2 weeks

For lesions limited to the gingiva, consider applying medication as a thin film in a custom carrier (made with soft mouthguard material, or fluoride tray material, extended onto gingiva). Then the medication can be applied in the custom carrier twice a day for 5 minutes.

OR, for widespread lesions, including lesions in hard to reach areas, consider oral rinse

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Dexamethasone elixir 0.05 mg/5 ml  
Disp: 300 ml  
Swish with 5ml and hold in mouth for two minutes then spit. Repeat four times per day for up to two weeks; to be re-evaluated after 2 weeks.

At re-evaluation visit, may decide to extend treatment for another two week, then stop or stop and start maintenance regimen, which could be to use the medication as directed for two days every week; or to discontinue and start again as needed, following the same directions.

- For all patients, discontinue regular toothpaste and switch to children’s toothpaste or dry mouth toothpaste.
- For a patient who wants/needs to use mouthwash, switch to non-alcohol mouthwash
- All patients with oral mucosal lesions should also be assessed for dry mouth/hyposalivation.
  - Ask the patient if the mouth feels dry.
  - Measure whole stimulated saliva flow by asking the patient to chew paraffin wax for 2 minutes and spit into a medicine cup (with ml markings) Whole stimulated flow less than 1 ml/minute should be considered sign of salivary gland hypofunction
- Results are greatly improved if the dry mouth is also managed at the same time. (we need normal saliva flow to heal oral mucosa) See the protocol for xerostomia/salivary gland hypofunction

- **If it fails to significantly improve after one month of treatment, OR for severe cases (oral ulcers are widespread, involve soft palate and pharynx) next line of therapy is systemic corticosteroids.**

**Systemic corticosteroids**

Prednisone 10 mg  
Disp: 46 tabs  
Take 50 mg in the morning for three days, then decrease dose by 10 mg every three days until finished.  
E.g. 50,50,50, 40,40,40,30,30, 20,20,20,10,10,10,0,10,0. This will take 18 days to finish.  
Do not stop taking this medication suddenly.  
Consider providing calcium supplementation.

Switch to topical corticosteroids if some lesions incompletely healed.  
Caution with patients with diabetes, hypertension, GI conditions- Consult with patient’s MD to manage side effects

**3. Oral Candidiasis**

**Topical Therapy:**

Rx: Clotrimazole troches 10 mg  
Disp: 70  
Dissolve one troche slowly 5 times per day for 14 days.
Rx: Nystatin oral suspension 100,000 units /ml  
Disp: 300 ml (14 day supply)  
Rinse with 1 tsp for two minutes 4 times per day and spit out. Nothing to eat or drink for 30 minutes afterwards.

Rx: Nystatin vaginal troches, 100,000 units  
Disp: 84 troches  
Dissolve one troche in mouth 6 times per day. Talk to Pharmacist before prescribing.

Rx: Nystatin ointment  
OR Clotrimazole cream 1%  
OR Miconazole cream 2%  
OR Ketoconazole cream 2%  
Disp: One tube, 15 or 30 gm  
Apply thin coat of medicine to entire inner surface of denture after each meal for 14 days.

4. Denture Stomatitis- Candidiasis

Topical Therapy
Rx: Nystatin ointment  
OR Clotrimazole cream 1%  
OR Miconazole cream 2%  
OR Ketoconazole cream 2%  
Disp: One tube, 15 or 30 gm  
Apply thin coat of medicine to entire inner surface of denture after each meal for 14 days.

Must treat the denture/appliance as well as the mouth, and angular cheilitis if present.  
Alternative to ointment/cream above- soak the denture in Nystatin suspension every night, until the oral treatment is completed.

Systemic Therapy for Oral Candidiasis
Rx: Fluconazole tablets, 100 mg  
Disp: 14 tablets  
Sig: Take two tabs stat, then 1 tab per day for 14 days.  
OR

Rx: Itraconazole tablets, 100 mg  
Disp: 28 tabs  
Sig: Take 1 tab twice per day with a meal or orange juice for 14 days.  
Ketoconazole tablets 200 mg  
Disp: 14 tablets  
Sig: Take 1 tab per day with a meal or orange juice for 14 days

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Systemic Antifungal Agents - Points to Consider:

Fluconazole  
Interacts with statins, macrolide antibiotics, benzodiazepines, phenothiazines, sirolimus, triazolam, ergot alkaloids, alprazolam, cispamide, barbiturates, amiodarone, midazolam, quinines, haloperidol, theophyllines, warfarin, metformin, cyclosporine, sulfonylureas, etc.
Look it up before prescribing
Caution with impaired liver function or renal function

Clotrimazole  
Caution if impaired liver function
~15% of patients with have transient elevated liver enzymes while taking this
No significant interactions reported

5. Angular Cheilitis (treat the corners of the mouth AND intraoral reservoir)

Topical Therapy
Rx: Nystatin 100,000 units and Triamcinolone 0.1 % Cream (Mycolog II)
Disp: 15 gram tube
Sig: Apply to affected area after each meal and before bedtime

6. Adjunctive Treatment in Oral Candidiasis, especially patients with multiple risk factors for recurrence:

- Chlorhexidine 0.12 % mouthrinse
- Rinse and spit twice daily
- Soak denture in Polident or similar denture cleanser with antifungal activity
- Denture can also be treated by soaking in Nystatin suspension overnight
- Take denture out for at least an hour every day (overnight best)

7. Xerostomia and Salivary Gland Hypofunction

Rx: Pilocarpine tablets, 5 mg
Disp: 90 tablets (1 month supply)
Take 1 tablet three times per day
May increase up to 15-30 mg/day, no more than 10 mg at any dose; 12 weeks of continuous therapy may be needed to determine efficacy.

Rx: Cevimeline capsules, 30 mg
Disp: 90 capsules (1 month supply)
Take 1 tablet three times per day
12 weeks of continuous therapy may be needed to determine efficacy.

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Rx: Caphosol™ artificial saliva  
FDA approved as an artificial saliva, to lubricate, replace normal ionic and pH balance of mouth  
Contains dibasic sodium phosphate 0.032%, monobasic sodium phosphate 0.009%, calcium chloride 0.052%, sodium chloride 0.569% and purified water.  
Solution A – phosphate mixed with Solution -B calcium  
Super saturated solution of calcium and phosphate – remineralizing effect  

Rx: Caphosol™ Artificial Saliva  
Disp: 10 boxes  
Mix A and B, swish and spit with ½ and then with the rest. Use 2-10 times per day to relieve dry mouth  
www.caphhasol.com  

8. Recurrent Oral Herpes Simplex infection  
Recurrent Herpes Labialis  
Rx: Valacyclovir 500 mg  
Disp: 8 caplets  
Take 4 caplets twice daily for one day (separate doses by 12 hours) Initiate therapy at the first sign of any prodrome.  

Rx: Abreva™ cream OTC  
Disp: 2 gram tube  
Apply to lesion 5 times/day during waking hours for 4 days. Start at the first symptoms  

References and Resources:  
American Academy of Oral Medicine  
http://www.aaom.com/oral-medicine-condition-information  
American Academy of Oral and Maxillofacial Pathology  
Sjogren’s Syndrome Foundation  
www.sjogren’s.org  
International Pemphigus and Pemphigoid Foundation  
http://www.pemphigus.org/  
National Institute of Dental and Craniofacial Research  
http://www.nidcr.nih.gov/OralHealth/  
The Little Dental Drug Booklet 2015-2016, Peter L. Jacobsen  

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