Care Step Pathway - Mucositis & Xerostomia

Assessment

Look:
- Does the patient appear uncomfortable?
- Does the patient appear unwell?
- Difficulty talking?
- Licking lips to moisten often?
- Weight loss?
- Does the patient appear dehydrated?
- Does the patient have visible lip, oral lesions, or thrush?

Listen:
- Does the patient report?
  - Mouth pain (tongue, gums, buccal mucosa)
  - Mouth sores
  - Difficulty eating
  - Waking during sleep to sip water
  - Recent dental-related issues
  - Need for dental work (e.g., root canal, tooth extraction)
  - Pain with swallowing/throat pain
- Have symptoms worsened?

Recognize:
- Any history of dry mouth?
- Any history of radiation to the mouth?
- Does patient smoke?
- Concomitant medications associated with causing dry mouth?
- Reports of dry mouth often accompany mucositis
- Other reports of dry membranes (e.g., eyes, nasal passages, vagina)

Grading Toxicity

Oral Mucositis

Definition: A disorder characterized by ulceration or inflammation of the oral mucosa

Grade 1 (Mild)
Asymptomatic or mild symptoms

Grade 2 (Moderate)
Moderately painful oral lesions; not interfering with oral intake; modified diet

Grade 3 (Severe)
Severe pain; interfering with oral intake

Grade 4 (Potentially Life-Threatening)
Severely painful oral lesions unmanaged with prior interventions; oral intake impossible

Grade 5 (Death)

Dry Mouth (Xerostomia)

Grade 1 (Mild)
Symptomatic (e.g., dry or thick saliva) without significant dietary alteration; unstimulated saliva flow >0.1 mL/min

Grade 2 (Moderate)
Moderate symptoms; oral intake alterations (e.g., copious water, other lubricants, diet limited to purees and/or soft, moist foods); unstimulated saliva <0.1 mL/min

Grade 3 (Severe)
Inability to adequately aliment orally; tube feeding or total parenteral nutrition indicated; unstimulated saliva <0.1 mL/min

Grade 4 (Potentially Life-Threatening)
Life-threatening consequences; urgent intervention indicated

Grade 5 (Death)

Management (including anticipatory guidance)

Overall Strategy
- Assess for other etiology of mucositis or dry mouth: candidiasis (particularly if recent or current use of oral corticosteroids); ask patient about new medications (particularly antihistamines), herbals, supplements, alternative/complementary therapies

Interventions for At-Risk Patients
- Advise basic oral hygiene:
  - Tooth brushing (soft toothbrush, avoid toothpaste with whitening agents)
  - Use of dental floss daily
  - >1 mouth rinses to maintain oral hygiene (avoid commercial mouthwashes or those with alcohol)
- If patient wears dentures, assess for proper fit, areas of irritation, etc.
- Dental referral if necessary
- Assess patient & family understanding of prevention strategies and rationale
  - Identify barriers to adherence

Grade 1 (Mild)
- Anticipate ICI therapy to continue
  - Advise ongoing basic oral hygiene Advise avoidance of hot, spicy, acidic foods
  - If symptomatic, anticipate management with topical steroid solution (oral rinse) (dexamethasone 0.5mg/5mL) and/or gel (fluocinonide 0.05%) Consider tacrolimus 0.1%. Assess patient & family understanding of recommendations and rationale
    - Identify barriers to adherence

Grade 2 (Moderate)
- Consider holding ICI therapy or any Grade 2 event (resume when Grade 0/1)
- ICI therapy to be discontinued for Grade 2 events persisting ≥6 weeks
- Bloodwork to assess for Sicca syndrome, Sjögren syndrome: ANA, anti-Ro and/or anti-La antibodies, anti-SSA and anti-SSB. Consider referral to rheumatology or oral medicine specialist
- Encourage vigilant oral hygiene

Xerostomia:
- Advise moistening agents
  - Saliva substitute
  - Synthetic saliva
  - Oral lubricants
  - Saliva stimulants (XyliMelts®)
- Advise secretagogues
  - Nonpharmacologic
    - Sugarless gum
    - Sugarless hard candies
    - Natural lemon
    - Avoid caffeine
    - Smoking cessation
  - Pharmacologic
    - Pilocarpine
    - Cevimeline HCl
- Corticosteroids rinse
  - Dexamethasone oral solution 0.1 mg/mL

If persistent or refractory, start systemic steroids: prednisone 20-40 mg/day (or equivalent), tapering over 4-6 weeks

Mucositis:
- Vigilant oral hygiene
  - Increase frequency of brushing to Q4 hours and at bedtime
  - If unable to tolerate brushing, advise chlorhexidine gluconate 0.12% or sodium bicarbonate rinses
    - 1 tsp baking soda in 8 ounces of water or
    - ½ tsp salt and 2 tbsp sodium bicarbonate dissolved in 4 cups of water
- Encourage sips of cool water or crushed ice
  - Encourage soft, bland nonacidic foods
  - Anticipatory guidance regarding use of pharmacologic agents (as applicable)
    - Analgesics
      - Gelclair®, Zilactin®
      - 2% viscous lidocaine applied to lesions 15 minutes prior to meals
      - 0.5% doxepin mouthwash
      - "Miracle Mouthwash": diphenhydramine/lidocaine/simethicone
    - Corticosteroid rinses
      - Dexamethasone oral solution 0.1 mg/mL, 1-2 tsp swish/spit 2x daily
  - Monitor weight
  - Monitor hydration status
- Nutrition referral if appropriate
- Assess patient & family understanding of toxicity and rationale for interventions as well as treatment hold
  - Identify barriers to adherence
- If persistent or refractory, anticipate use of systemic steroids; consider biopsy or otolaryngology evaluation

Grades 3/4 (Severe or Life-Threatening)
- ICI therapy to be withheld for first occurrence Grade 3 event. ICI therapy to be discontinued for any Grade 4 event or for a Grade 3 event persisting ³ 12 weeks
- Anticipate hospitalization if unable to tolerate oral solids or liquids
- Anticipate need for supplemental nutrition
  - Enteral
  - Parenteral
- Anticipatory guidance regarding use of pharmacologic agents
  - Analgesics
    - Systemic opioids may be indicated
- Oral care
- Assess patient & family understanding of toxicity and rationale for interventions as well as treatment discontinuation
  - Identify barriers to adherence

*Administering Corticosteroids:

Corticosteroid taper instructions/calendar as a guide but not an absolute
- Taper should consider patient's current symptom profile
- Close follow-up in person or by phone, based on individual need and symptomatology
- Corticosteroids may cause indigestion; provide antacid therapy daily as gastric ulcer prevention while on corticosteroids (e.g., proton pump inhibitor or H2 blocker if prednisone dosage is >20 mg/day)
- Review corticosteroid medication side effects: mood changes (angry, reactive, hyperaware, euphoric, manic), increased appetite, interrupted sleep, oral thrush, fluid retention
- Be alert to recurring symptoms as steroids taper down and report them (taper may need to be adjusted)

Long-term high-dose corticosteroids:
- Consider antimicrobial prophylaxis (sulfamethoxazole/trimethoprim double dose M/W/F; single dose if used daily) or alternative if sulfa-allergic (e.g., atovaquone [Mepron®] 1500 mg po daily)
- Consider additional antiviral and antifungal coverage
- If extended corticosteroid use, risk for osteoporosis; initiate calcium and vitamin D supplements
- Patients with asthma or who smoke may have decreased sensitivity to corticosteroids

ICI = immune checkpoint inhibitor; po = by mouth

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