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 oral thrush?

Listen:
- Does the patient report?
  - Mouth pain (tongue, gums, buccal mucosa)
  - Mouth sores
  - Difficulty eating
  - Waking during the 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; intervention not indicated

Grade 2 (Moderate)
Moderate pain or ulcer; not interfering with oral intake; modified diet indicated

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

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

Grade 5 (Death)

Dry Mouth (Xerostomia)

Definition: A disorder characterized by reduced salivary flow in the oral region

Grade 1 (Mild)
Symptomatic (e.g., dry or thick saliva) without significant dietary alteration; unstimulated saliva flow >0.2 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 to 0.2 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; ask patient about new medications (particularly antihistamines), herbals, supplements, alternative/complementary therapies, ensure baseline swabs taken for viral and MC&S

Interventions in 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 immunotherapy to continue
- Advise ongoing basic oral hygiene Advise avoidance of hot, spicy, acidic foods
- Anticipate possible alternative treatment(s)
  - Zinc supplements or 0.2% zinc sulfate mouthwash
  - Probiotics with *Lactobacillus*
  - Benzydamine HCl
- Assess patient & family understanding of recommendations and rationale
  - Identify barriers to adherence

Grade 2 (Moderate)
- Ipilimumab to be withheld for any Grade 2 event (resume when Grade 0/1)
- Immunotherapy to be discontinued for Grade 2 events persisting ≥6 weeks (ipilimumab) or ≥12 weeks (pembrolizumab, nivolumab)
- Assess for Sicca syndrome, Sjögren syndrome
- Encourage vigilant oral hygiene

<u>Xerostomia:</u>
- Advise moistening agents
  - Saliva substitute
  - Synthetic saliva
  - Oral lubricants
  - Saliva stimulants (XyliMelts®)
- Advise secretagogues
  - Nonpharmacologic
    - Sugarless gum
    - Sugarless hard candies
    - Natural lemon
  - Pharmacologic
    - Pilocarpine
    - Cevimeline HCl

<u>Mucositis:</u>
- 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
      - 2% morphine mouthwash
      - 0.5% doxepin mouthwash
      - "Miracle Mouthwash": diphenhydramine/lidocaine/ simethicone
    - Corticosteroid rinses
      - Dexamethasone oral solution, prednisolone oral solution (24 mg/5 mL), hydrocortisone 2 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
- Avoid morphine mouthwashes
- If persistent, consider biopsy or otolaryngology evaluation

Grades 3/4 (Severe or Life-Threatening)
- Nivolumab to be withheld for first occurrence Grade 3 event. Immunotherapy to be discontinued for any Grade 4 event or for a Grade 3 event persisting ≥12 weeks (ipilimumab, pembrolizumab, nivolumab) or any recurrent Grade 3 event (pembrolizumab, nivolumab)
- Anticipate hospitalization if unable to tolerate oral solids or liquids
- Unclear role of systemic corticosteroids*
- 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:

<u>Steroid taper instructions/calendar as a guide but not an absolute</u>
- Taper should consider patient's current symptom profile
- Close follow-up in person or by phone, based on individual need & symptomatology
- Steroids cause indigestion; provide antacid therapy daily as gastric ulcer prevention while on steroids (e.g., proton pump inhibitor or H2 blocker if prednisone dosage is >20 mg/day)
- Review steroid 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 & report them (taper may need to be adjusted)

<u>Long-term high-dose steroids</u>:
- 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
- Avoid alcohol/acetaminophen or other hepatoxins
- If extended steroid use, risk for osteoporosis; initiate calcium and vitamin D supplements

po = by mouth