

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 thrush?

Listen:

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

Recognise:

- 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 characterised 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 characterised 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

Interventions in at-risk patients

- Advise basic oral hygiene:
 - o Tooth brushing (soft toothbrush, avoid toothpaste with whitening agents)
 - o Use of dental floss daily
 - o >1 mouth rinses to maintain oral hygiene (avoid commercial mouthwashes or those with alcohol)
 - o 1/4 teaspoon bicarbonate of soda in 1 cup of warm water plus 1/4 teaspoon salt in 1 cup of water
 - o Alcohol-free mouthwash
 - o Peter MacCallum Cancer Centre mouthwash
 - o Biotene or Oral 7 for xerostomia and mucositis
- 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
 - o 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)
 - o Zinc supplements or 0.2% zinc sulfate mouthwash
 - o Probiotics with *Lactobacillus*
 - o Benzylamine HCl
- Assess patient & family understanding of recommendations and rationale
 - o 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

Xerostomia:

- Advise moistening agents
 - o Saliva substitute
 - o Synthetic saliva
 - o Oral lubricants
- Advise secretagogues
 - o Nonpharmacologic
 - Sugarless gum
 - Sugarless hard candies
 - Natural lemon
 - o Pharmacologic
 - Pilocarpine
 - Cevimeline HCl

Mucositis:

- Vigilant oral hygiene
 - o Increase frequency of brushing to Q4 hours and at bedtime
 - o If unable to tolerate brushing, advise sodium bicarbonate rinses
 - 1/4 teaspoon bicarbonate of soda in 1 cup of warm water plus 1/4 teaspoon salt in 1 cup of water
- Encourage sips of cool water or crushed ice
- o Encourage soft, bland nonacidic foods
- o Anticipatory guidance regarding use of pharmacologic agents (as applicable)
 - For analgesics, refer to treating medical oncologist/treating health service
 - Corticosteroid rinses
 - Dexamethasone oral solution, prednisolone oral solution (24 mg/5 mL), hydrocortisone 2 mg/mL, 1-2 tsp swish/spit 2x daily
- o Monitor weight
- o Monitor hydration status
- Dietician referral
- Assess patient & family understanding of toxicity and rationale for interventions as well as treatment hold
 - o 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 hospitalisation if unable to tolerate oral solids or liquids
- Unclear role of systemic corticosteroids*
- Anticipate need for supplemental nutrition
 - o Enteral
 - o Parenteral
- Anticipatory guidance regarding use of pharmacologic agents
 - o Analgesics
 - Systemic opioids may be indicated
- Oral care
- Assess patient & family understanding of toxicity and rationale for interventions as well as treatment discontinuation
 - o Identify barriers to adherence

*Administering Corticosteroids:

Steroid 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 & 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)

Long-term high-dose steroids:

- Consider antimicrobial prophylaxis
- Consider additional antiviral and antifungal coverage
- Avoid alcohol/acetaminophen or other hepatotoxins
- If extended steroid use, risk for osteoporosis; initiate calcium and vitamin D supplements