Ontario Health
Cancer Care Ontario

Symptom Management Algorithm

Diarrhea

In Adults with Cancer

About Diarrhea

Definition

- Diarrhea is an abnormal increase in stool liquidity and frequency that may be accompanied by abdominal cramping

Risk Factors

- Common predisposing risk factors for diarrhea include: drugs, disease effects, treatments, and concurrent disease

Screening

ESAS-R+ (If Available)

- If patient screens 1 or higher on ESAS R+ then move down to assessment
- If patient screens high on ESAS R+ then use clinical judgement for how to proceed through algorithm

Assessment

Diarrhea Assessment Acronym: OPQRSTUV

Ask the patient directly, whenever possible. Involve family and caregivers as appropriate, and as desired by the patient

Category	Assessment Questions
Onset	• When did the diarrhea begin? How long does it last?
Provoking/Palliating	• What may be causing the diarrhea? What makes it better? What makes it worse (e.g. medications, cancer treatments, diet changes, changes in amount of food or fluid eaten)?
Quality	• How would you describe your stools (e.g. colour, hardness or softness, odour, amount)? Is there blood or mucous with the stool? Is the stool oily? Do you feel an urgency to go to the bathroom? See the Bristol Stool Chart types 6 and 7
Related Symptoms	• Is there any discomfort associated with the diarrhea? Where do you feel this discomfort? Can you describe it? Do you have any abdominal bloating? Do you have lots of gas? Do you have any other symptoms (e.g. nausea, vomiting, loss of appetite, thirst, fatigue, weakness, fever, feeling like your rectum is not empty after a bowel movements, painful skin around the anus)? Do you feel the need to evacuate your bowels but can't (i.e. tenesmus)? Do you have blood or mucous in your stool?
Severity	• How often do you have diarrhea? Does it come and go? When do you have diarrhea? Does it ever occur at night? Do you have accidents? How frequent are your bowel movements when you have diarrhea? Have you had constipation prior to the diarrhea? (may suggest overflow diarrhea)
Treatment	• What have you taken to treat the diarrhea? Do you have any side effects from the medications or treatments for the diarrhea? What have you tried in the past? What tests have been done for the diarrhea?
Understanding	• How does the diarrhea affect your life? How bothered are you by it?
Values	• What are your normal bowel habits? What does the diarrhea mean to you? How has it affected you and your family or caregiver? What is your bowel care goal?

Additional Assessment

- Physical assessment should include vital signs, functional ability, hydration status, cognitive status, abdominal exam, rectal exam, and neurological exam if a spinal cord or cauda equina lesion is suspected

Diagnostics

- If the patient had constipation and overflow diarrhea is suspected, consider abdominal x-rays to determine if obstruction is partial or complete, high or low. If severe stool loading of the colon is suspected in a constipated patient, a flat plate of the abdomen can be used to assess the amount and location of stool in the colon. This can help determine appropriate therapies
- If findings are suggestive of colitis, then further investigations may be warranted
- If C. difficile is suspected, order the test performed at your institution to make the diagnosis

Intervention Considerations for All Patients

- Identifying the underlying etiology of diarrhea is essential in determining the interventions required. Ensure that C. difficile (or other) infection is ruled out in the correct clinical context
- Consider performance status, fluid intake, diet, physical activity and lifestyle when managing diarrhea

Treatment-Induced Diarrhea

Chemotherapy-Induced Diarrhea

- Patients undergoing high-dose chemotherapy are more susceptible to diarrhea
- In patients receiving chemotherapy, the incidence of diarrhea can range from 50%–90%

Radiation-Induced Diarrhea

- Radiation-induced diarrhea is seen most often with radiation to abdominal and pelvic fields
- Acute radiation enteritis can be seen in up to 70% of patients, depending on treatment and patient predisposing factors
- Late-onset effects, manifested as chronic enteritis, can occur months or years after treatment

Immunotherapy-Induced Diarrhea

- Gastrointestinal side effects with immunotherapy can manifest as diarrhea, abdominal pain, or melena (black, tarry stools)
- In severe cases patients can develop colitis and bowel perforation with potential need for surgery
- Fatal cases of immune-mediated enterocolitis have occurred

Non-Pharmacological Interventions

The Palliative Performance Scale (PPS) is a reliable and valid tool for assessing a patient's functional status

PPS Stable, Transitional and End of Life (30-100%)	PPS Stable and Transitional (40-100%)	PPS End of Life (10-30%)
Diet • Eat small frequent meals • Limit caffeine and fried, greasy foods and foods high in lactose • Avoid sorbitol containing foods (e.g. sugar-free gum or candy) • Limit/avoid foods high in insoluble fibre (e.g. wheat bran, fruit skins, root and vegetable skins, nuts and seeds, dark leafy greens) • Include foods high in soluble fibre (e.g. barley, potatoes, bananas, applesauce) • Avoid hyper-osmotic liquids (e.g. fruit juice and sodas) • If patient is on enteral feeds, consider possibility of feed-associated diarrhea *Fluid Intake* • If patient can tolerate liquids orally, and dehydration is not severe: ○ An oral rehydration solution can be prepared by mixing 1/2 teaspoon salt and 6 level teaspoons sugar in 1 litre of tap water ○ Commercially available balanced rehydration solutions containing appropriate amounts of sodium, potassium and glucose are ideal (e.g. Pedialyte) but are expensive. If this is not available or feasible then sports drinks can be considered (e.g. Gatorade) • Parenteral hydration (i.e. intravenous) may be required for severe diarrhea and dehydration	*Quality of Life* • Persistent diarrhea can have severe effects on image, mood and relationships. Attention must be paid to understanding the emotional impact from the patient's perspective • Some patients feel socially isolated because of their incontinence. Here are some practical strategies: ○ Carefully plan all outings ○ Carry a change of clothes ○ Know the location of restrooms ○ Use absorbent undergarments *Lifestyle* • Take steps to prevent skin excoriation ○ Good skin hygiene: ▪ Use mild soap ▪ Consider sitz bath ○ Apply a skin barrier product such as: ▪ Ihle's paste and stoma powder ▪ Zinc compounds/derivatives ▪ Consider antifungals selectively ▪ If skin breakdown is causing pain, consider topical opioids ▪ If fissure consider topical diltiazem	• Exercise good clinical judgment regarding the burden and benefits of parenteral fluids for the individual patient

Pharmacological Interventions

- The recommendations below are based on low level evidence and consensus due to limited available research
- Consider etiology of diarrhea before initiating any pharmacologic treatments
- Ask the patient on usage of non-traditional or alternative therapies for bowel management. If so, need to be aware of potential drug interactions and toxicities
- A single liquid or loose stool usually does not require intervention
- A single drug should be used for diarrhea and care should be taken to avoid sub-therapeutic doses. If maximum dose of a single drug is reached and diarrhea persists, then consider adding a second agent
- If the perianal skin is inflamed or excoriated, use a topical corticosteroid cream for 7 days (available without a prescription)

First Line Agents	Second Line Agents	Third Line Agents
• Loperamide (2mg tablets; 2mg/15 ml solution) is the preferred first-line anti-diarrheal agent: ○ 2 mg orally after each loose stool, up to 16mg per day ○ For chronic diarrhea, a regular dose, twice a day can be used, based on the effective 24-hour dose, plus 2mg after each loose bowel movement, up to 16mg per day total	• Lomotil (1-2 tabs q4h prn, max 4 times/24hours) can be considered if first line agents do not achieve the desired effect. ○ 1-2 tablets orally as needed, up to 4 times a day (maximum 20mg diphenoxylate a day) ○ Titrate dose down once diarrhea controlled, to determine the maintenance dose ○ This agent is absorbed systemically and there is potential for drug interactions	*Opioids* • Consider if the patient is not currently on an opioid for other indications: ○ May consider codeine but this can have a variable effect ○ May consider morphine or hydromorphone *Other Agents to Consider:* • Octreotide subcutaneously for severe, refractory diarrhea • Pancrelipase (i.e. Creon) where pancreatic insufficiency is a contributing factor • Cholestyramine (i.e. Olestyr) where bile salt diarrhea is suspected • Tryptophan hydroxylase inhibitor (i.e. Telotristat) in patients with diarrhea in the context of a functioning neuroendocrine tumor

Disclaimer

References

1. Healthlink BC (2019). Hydrocortisone Cream, Ointment- Rectal
2. Oncology Nursing Society (2017). Chemotherapy-Induced Diarrhea
3. Oncology Nursing Society (2017). Radiation-Induced Diarrhea
4. Oncology Nursing Society (2019). Immunotherapy-Induced Diarrhea
5. Dans, M., et al. (2021). NCCN Guidelines® Insights: Palliative Care, Version 2.2021: Featured Updates to the NCCN Guidelines. Journal of the National Comprehensive Cancer Network, 19(7), 780-788.
6. Canadian Digestive Health Foundation (2021). Constipation signs and symptoms

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