Mucositis (or Stomatitis)

Mucositis (sometimes called stomatitis) is inflammation and damage of the mucous membranes lining the mouth and other parts of the gastrointestinal (GI) tract.

Who Develops Mucositis?
Mucositis is a common side effect of chemotherapy and can also be seen in individuals who receive bone-marrow transplants or radiation therapy. Younger patients and those with poor dental hygiene, dry mouths, or gum disease are at higher risk of developing mucositis, though it is not possible to predict which patients will develop mucositis. Specific chemotherapy drugs, their dose and frequency of administration, and concomitant irradiation can affect the risk of developing mucositis.

What Are the Symptoms and Complications?
Mucositis typically develops 5 to 14 days after chemotherapy. Symptoms range from a mild soreness in the mouth to a severe form requiring hospitalization. Symptoms include pain, burning, and redness in the mouth. Ulcers may develop, increasing the risk for bleeding and infection. Dryness of the mouth can lead to bad breath as well as difficulty in speaking and tasting food. Pain and difficulty swallowing may limit food and water intake, leading to dehydration and weight loss. A feeding tube may sometimes be required to supplement or replace feeding by mouth.

The symptoms of mucositis of the GI tract depend on the specific portion affected but can include any of the following:
- Abdominal pain
- Nausea
- Diarrhea
- Passing blood and/or mucus with stools
- Pain with bowel movements

How Is Mucositis Treated?
Uncomplicated mucositis is a self-limited condition. Control of pain is critical, and systemic pain medication may be required if topical agents are ineffective. Swishing ice chips in the mouth can provide relief. Foods that are hard or require much chewing, or those that are dry, spicy, hot, or acidic should be avoided, along with alcohol and smoking. Oral care, including removal of dentures if present and frequent mouth rinses (with water or a solution made by dissolving a teaspoon of baking soda in 4 ounces of water) may also be helpful.

In severe cases, patients may need to be admitted to the hospital for pain control, intravenous fluids and nutrition, and monitoring and treatment of superimposed infection or bleeding. Patients with uncontrolled diarrhea and blood in their stool are often admitted to the hospital. Most patients who develop mucositis are able to safely resume chemotherapy, although the dose and schedule of further treatment may sometimes be altered.

Can Mucositis Be Prevented?
A thorough oral and dental care assessment prior to initiating chemotherapy may reduce the risk of mucositis. Swishing ice chips in the mouth for 30 minutes around the time of chemotherapy, sometimes referred to as “oral cryotherapy,” may provide a very inexpensive and effective way to prevent or minimize mucositis.

Palifermin, a drug that promotes healing and regeneration of cells, low-level laser irradiation to the mouth, and mouthwashes may be helpful in preventing stomatitis in certain high-risk patients. In addition, certain medications can be used to reduce GI mucositis in the appropriate clinical setting.

For More Information
Multinational Association of Supportive Care in Cancer and International Society of Oral Oncology (MASCC/ISOO) clinical practice guidelines for mucositis secondary to cancer therapy.

National Cancer Institute Common Terminology Criteria for Adverse Events (CTCAE) version 4

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