

Mucositis



What is Mucositis?

Mucositis is the painful inflammation and ulceration of the mucous membranes lining the digestive tract, usually as an adverse effect of chemotherapy and radiotherapy treatment for cancer. Mucositis can occur anywhere along the gastrointestinal (GI) tract, but oral mucositis refers to the particular inflammation and ulceration that occurs in the mouth. Oral mucositis is a common and often debilitating complication of cancer treatment.

Symptoms

If you have Mucositis you may have some of the following symptoms:

- Red, shiny, or swollen mouth and gums
- Blood in the mouth
- Sores in the mouth or on the gums or tongue
- Soreness or pain in the mouth or throat
- Difficulty swallowing or talking
- Feeling of dryness, mild burning, or pain when eating food
- Soft, whitish patches or pus in the mouth or on the tongue
- Increased mucus or thicker saliva in the mouth

An extreme case of the condition is called confluent mucositis. In a worst case, the mucous membrane of the patient's entire mouth and tongue can be coated by a white mucus coating that is up to a millimeter thick. The combination of mucus, excess saliva and pain can make it difficult or even impossible to eat.

Causes

Mucositis is usually a side effect of cancer treatment.

Radiotherapy and chemotherapy

Radiotherapy and chemotherapy are very effective treatments for killing cancer cells but can also damage healthy cells, particularly cells in your mucous membrane, which are more vulnerable to damage. The mucous membrane is the soft layer of tissue that lines your digestive system, from the mouth to the anus.

Radiotherapy and chemotherapy damage the DNA of the cells on the lining of your mucous membrane, which damages the cells and prevents them from regenerating.

This causes the layer of tissue that lines your mucous membrane to eventually break down and ulcers will form. Your cancer treatment team will make every effort to limit the damage to your mucous membrane, but it is not always possible to prevent damage occurring.

Biological therapies

Biological therapies, also called targeted therapies, are another type of cancer treatment that can cause oral mucositis.

Some cases are thought to be different from mucositis caused by radiotherapy or chemotherapy, although at the moment they are poorly understood.

Diagnosis

Oral mucositis

If you are receiving high-dose chemotherapy or radiotherapy, it is likely you will receive regular (weekly) assessments for mucositis until the risk of developing the condition has passed.

To confirm a diagnosis of oral mucositis an assessment is made by:

- examining your mouth
- asking you about any symptoms of pain that you have
- checking you are still able to eat and drink properly

Healthcare professionals use a grading system to determine how serious the symptoms of oral mucositis are. There are several different grading systems available.

The World Health Organization (WHO) uses the grading system described below.

- grade one: you are experiencing symptoms of soreness but there are no ulcers in your mouth
- grade two: you have ulcers in your mouth but are still able to eat solid food

- grade three: you are no longer able to eat solid food but can still swallow liquids
- grade four: you are unable to swallow solid foods or liquid

Cases of grade one or two mucositis can usually be treated at home. Cases of grade three and four mucositis will usually require admission to hospital so you can be given nutritional support and your general health can be carefully monitored.

Gastrointestinal mucositis

A diagnosis of gastrointestinal mucositis can usually be made by asking you about your symptoms. In rare cases, further testing may be required if it is thought that a serious complication has occurred due to your gastrointestinal mucositis. For example, a bowel obstruction (blockage) or a perforated (burst) intestine may be diagnosed using a computerised tomography (CT) scan. This is where multiple X-rays are taken at slightly different angles and put together by a computer to create a detailed image of the inside of your body.

Statistics on Mucositis

Oral and gastrointestinal (GI) mucositis affects almost all patients undergoing high-dose chemotherapy and hematopoietic stem cell transplantation (HSCT), 80% of patients with malignancies of the head and neck receiving radiotherapy, and a wide range of patients receiving chemotherapy. Alimentary tract mucositis increases mortality and morbidity and contributes to rising health care costs.

For most cancer treatment, about 5-15% of patients get mucositis. However, with 5-fluorouracil (5-FU), up to 40% get mucositis, and 10-15% get grade 3-4 oral mucositis. Irinotecan is associated with severe GI mucositis in over 20% of patients. 75-85% of bone marrow transplantation recipients experience mucositis, of which oral mucositis is the most common and most debilitating, especially when melphalan is used. In grade 3 oral mucositis, the patient is unable to eat solid food, and in grade 4, the patient is unable to consume liquids as well.

Radiotherapy to the head and neck or to the pelvis or abdomen is associated with Grade 3 and Grade 4 oral or GI mucositis, respectively, often exceeding 50% of patients. Among patients undergoing head and neck radiotherapy, pain and decreased oral function may persist long after the conclusion of therapy. Fractionated radiation dosage increases the risk of mucositis to > 70% of patients in most trials. Oral mucositis is particularly profound and prolonged among HSCT recipients who receive total-body irradiation.

Risk Factors for Mucositis

Certain things can increase your risk of developing mucositis, or may increase your risk of mucositis being severe. These include:

- being younger – oral mucositis is more severe in young people
- smoking
- drinking alcohol
- eating spicy foods
- dehydration
- having a dry mouth during your treatment – a dry mouth is another side effect of radiotherapy and chemotherapy
- not looking after your mouth properly before and during treatment – for example, by not brushing your teeth regularly
- receiving a higher dose of chemotherapy or being treated with chemotherapy for a long time
- receiving high-dose radiotherapy to your mouth or neck

Mucositis can also sometimes develop during and after a stem cell transplant (bone marrow transplant). This is because cancer treatments are used in combination with medicines that reduce the effectiveness of your immune system (the body's natural defence against infection and illness) during this procedure.

Treatment

1.] Self-help

If you have oral mucositis, it is very important you have a good oral hygiene routine because it can reduce the severity of your symptoms and how long you experience them.

Below is some general advice on good oral hygiene. However, always follow any advice your cancer treatment team gives you if it differs from the advice below.

- Brush your teeth every morning and evening and after every meal.
- Use a toothbrush with soft bristles.
- Replace your toothbrush regularly. Most toothbrushes need to be replaced every three months.
- Floss your teeth at least once a day or as advised by your treatment team.
- Rinse your mouth five or six times a day using a bland rinse. A bland rinse is a mixture of water and sodium bicarbonate (baking soda) or a mixture of water and

salt (to make a saline solution). Your treatment team will be able to advise you about the type of bland rinse suitable for you.

- Do not use a mouth rinse that contains alcohol.
- Avoid tobacco, alcohol and irritating foods, such as hot, spicy, acidic or rough foods.
- Use a water-based moisturiser to protect your lips.
- Make sure you drink plenty of fluids throughout the day. A minimum of 1.2 litres (2 pints) is the recommended daily amount.

Ice cubes

Sucking ice cubes or ice chips is sometimes recommended as a way of providing relief from the symptoms of oral mucositis. The healthcare professionals treating you will advise you about whether ice cubes could help you or not.

2.] Medicines

Benzydamine hydrochloride spray helps to relieve pain associated with oral mucositis. Before taking any medicines ask your pharmacist for advice. Follow the instructions in the patient information leaflet that comes with the medicine.