



Oral Complications Of Cancer Treatment

General Complications

Nausea and vomiting (early onset), dental demineralization, altered taste (starts about 2nd week)

Mucositis/stomatitis (starts about 2nd week)

Xerostomia/salivary gland dysfunction (starts about 3rd week)

Hypersensitive teeth (early and delayed onset), burning mouth

Bacterial, viral, or fungal infection (secondary infections)

Erythema and edema of skin and facial tissues, nutritional compromise, dysphasia, altered development in the child patient (delayed onset), difficulty chewing and reduction of chewing power, altered speech, altered social function

Treatment-Specific Complications To Radiation Therapy

Post-radiation dental caries/cavities (delayed onset)

Muscle trismus/tissue fibrosis (delayed onset)

Osteoradionecrosis (delayed onset)

Chemotherapy

Neurotoxicity, bleeding

Management Of Mucositis

- Avoid tobacco and alcohol
- Gentle oral hygiene
- Floss your teeth after each meal. Be careful not to cut the gums.
- Brush your teeth after each meal. Use an ultrasoft, even-bristle brush and a bland toothpaste preferably containing fluoride (e.g. BioXtra Toothpaste, Biotene Toothpaste). Brushing with a sodium bicarbonate - water paste is also helpful, Arm & Hammer Dental Care toothpaste, tooth powder and Sage Mouthpaste dentifrice are bicarbonate based. If a toothbrush is too irritating, cotton-tip swabs

(Q-tips) or foam sticks (Sage Ora-Swab or Toothette) can provide some mechanical cleaning.

- Use a barrier-forming mouthwash (e.g. Gelclair, Alocclair). Some commercial rinses containing chlorhexidine have been shown to worsen established radio-mucositis, besides altering taste and staining teeth. Therefore, their use in treating mucositis is not recommended. The adverse effect is mostly extreme pain due to the alcohol content of these rinses. Rinse with an anti-plaque solution two or three times a day when you cannot follow other oral hygiene procedures.

- A pulsating water device, e.g., Water-Pik, irrigators, will remove loose debris. Use warm water with 1/2 teaspoonful each of salt and baking soda and low pressure to prevent damage to tissue.
- Use custom made, flexible vinyl trays for self- application of fluoride gel to the teeth for five minutes once a day after brushing. (Stannous fluoride gel 0.4%, put 7 to 10 drops in a custom tray and cover teeth for 5 minutes every day. Gel must not be swallowed.)
- PTA lozenges (Polymyxin E, Tobramycin and Amphotericin B): This medication should be started two days before therapy and continued during radiation (generally fractionated irradiation with a total dose of 64 Gy or more). It has been proved to reduce duration and degree of mucositis in patients irradiated for oral carcinoma.
- Sodium bicarbonate mouthwash: Rinse with a warm, dilute solution of sodium bicarbonate (baking soda) or salt & bicarbonate (also commercially available as Sage Salt & Soda Rinse) every two hours, to bathe the tissues and control oral acidity. Two teaspoons of bicarbonate (or one teaspoon of table salt plus one teaspoon of bicarbonate) per quart solution is recommended.
- Benadryl elixir - Benzydamine hydrochloride

is a nonsteroidal drug with anaesthetic, anti-inflammatory and antimicrobial properties which reduces the severity of radio-mucositis).

- Topical steroids
- Orabase or Milk of magnesia or Kaopectate (as a coating agent to protect ulcerated area)
- Soft and non-irritating foods
- A bland and liquid diet avoiding alcohol, caffeine or any other irritant such as tobacco products. Food should be lukewarm.
- Maintain hydration
- Use humidifier, vaporizer; a humidifier in the sleeping area will alleviate or reduce night time oral dryness.

Management Of Xerostomia

- If the mouth is dry, sip cool water frequently (every ten minutes) all day long. Allowing ice chips to melt in the mouth is comforting.
- Artificial salivas, e.g., Sage Moist Plus spray, Moi-Stir, Salivart, Xero-Lube, Orex, can be used as frequently as needed to make the mouth moist. A mouth moisturizing gel, i.e. Sage Mouth Moisturizer or OralBalance saliva replacement gel may be helpful when applied to the gums.
- Keep the lips lubricated with petrolatum or a lanolin- containing lip preparation (e.g. BioXtra moisturising gel).
- Use an alcohol-free mouth rinse with added

fluoride (e.g. BioXtra alcohol free mouth rinse, Biotene mouthwash). Commercial mouth rinses with alcohol bases, coffee, tea and colas with caffeine should be avoided, as they tend to dry the mouth.

- Sugarless lemon drops e.g. Saliva Stimulating Tablets (SST)
- Sorbitol or Xylitol-based chewing gum (e.g. BioXtra chewing gum)
- Pilocarpine (Salagen, 5mg. tds)

Management Of Secondary Infection

- Culture – Cytologic study – Antibiotics – Acyclovir – Antifungals
- If a fungal infection develops, antifungal medications can be prescribed.
 - e.g. Nystatin pastilles; let one dissolve in the mouth five times a day, or let a 10 mg clotrimazole (Mycelex) troche dissolve in the mouth five times a day. Swish with Nystatin oral suspension for two minutes timed by a clock. Either spit out or swallow, as directed by your dentist or physician.
 - Diflucan (Fluconazole) tablets 100 mg, 1 tablet per day for 4 days then 1 tablet every 3 days.
 - Mix 1 part of hydrogen peroxide in 6 parts of warm water and add a dash of salt. Swish this mixture for 2 to 4 minutes several times a day.