1-Mouth ulcer

Oral sores, mouth ulcers, aphthous ulcers, or canker sores are terms used to describe clinical presentations of superficial painful oral lesions that occur in recurrent bouts at intervals between a few days to a few months.
They are extremely common and affecting as many as one in five of the population, and are a recurrent problem in some people.
Mouth ulcer can occur anywhere in the oral cavity and oropharyngeal region, including the lips, oral mucosa (movable tissue inside the lips, vestibule, and cheeks), gingivae or gums, tongue, soft and hard palate, and throat. Most oral sores are painful and annoying and, in severe cases, can cause significant morbidity.

Types of aphthous ulcers

Minor	*Major (Sutton's disease)*	*Herpetiform*
80% of patients	*10–12% of patients*	*8–10% of patients*
2–10 mm in diameter (usually 5–6 mm)	*Usually over 10 mm in diameter; may be smaller*	*Pinhead-sized*
Round or oval	*Round or oval*	*Round or oval, coalesce to form irregular shape as they enlarge*
Usually not very painful	*Prolonged and painful ulceration; may present patient with great problems – eating may become difficult*	*May be very painful*
Healing occurs in about 7 to 10 days.	*Healing is slow, over 10 to 40 days.*	*Healing takes about 7 to 10 days.*

Other types

- ***Smoking*** and ***alcohol*** consumption are two major risk factors for mouth ulcer.
- Mouth ulcer caused by ***trauma***
- Mouth ulcer caused by ***oral thrush*** usually presents as creamy-white soft elevated patches.
- ***Herpes simplex virus type 1 (HSV-1)*** is a common cause of oral ulceration in children. This infection is referred to as ***primary herpetic gingivostomatitis (PHGS)*** and usually occurs in infants and children (between 2 and 3 years of age). ***Recurrent Herpetic Infection*** is also called "***cold sores***".

- Oral ***cancer*** patients are suffering from mouth ulcer.
- Mouth ulcer can be noticed in patient suffering from some ***skin conditions***, such as *Erythema multiforme.*
- Most ***Behcet's syndrome*** patients are suffering from recurrent, painful major aphthous ulcers that are slow to heal.
- Other autoimmune diseases such as ***Crohn's disease***.
- Some ***medications*** can cause ulcers. These include cytotoxic agents, nicorandil, alendronate, NSAIDs and beta-blockers.

Treatment

Most cases are self-limiting. Symptomatic treatment of minor aphthous ulcers can relieve pain and reduce healing time. Topical corticosteroids remain the mainstays of treatment. Other active ingredients include antiseptics, and local anesthetics.
If there is no improvement after 1 week, the patient should see the doctor.

Agents	Comments
Chlorhexidine mouthwash	Mouthwashes can be useful where ulcers are difficult to reach. It prevents secondary bacterial infections.
Topical corticosteroids	Hydrocortisone and other steroids act locally on the ulcer to reduce inflammation and pain and to shorten healing time. Corticosteroids have no effect on recurrence.
Local analgesics	Benzydamine mouthwash or spray and choline salicylate dental gel are no more beneficial than a placebo, but they can be useful in very painful major ulcers as they can produce transient pain relief.
Local anesthetics	Local anesthetic (lidocaine and benzocaine) formulations are effective in producing temporary pain relief, maintenance of gels and liquids in contact with the ulcer surface is difficult. Reapplication of the preparation may be done when necessary.
Protectants and bioadherents	Mucoadhesive action reduces pain by adhering to the mucosal surface of the mouth. Orabase is a paste of gelatin, pectin and carmellose sodium, which sticks when it comes in contact with wet mucosal surfaces. Gelclair is an oral bioadherents product.

Referral points:

Patient suffering from mouth ulcers is referred in case of:

- Duration of longer than 3 weeks, or if there is no improvement after 1 week of treatment.
- Associated weight loss
- Ulcer suggestive of cancer
- Involvement of other mucous membranes or eyes
- Rash
- Suspected adverse drug reaction
- Diarrhea

2- Oral thrush

Thrush (candidiasis or candidosis) is a fungal infection that occurs commonly in:

- the mouth (oral thrush)
- the nappy area in babies
- the vagina

Oral thrush in babies can be treated by the pharmacist. Oral thrush is most common in babies, particularly in the first few weeks of life. The infection can pass on by the mother during childbirth. Oral thrush in older children and adults is rarer, but may occur after antibiotic or inhaled steroid treatment. In this older group it may also be a sign of immunosuppression.

Clinical presentation

Oral thrush affects the surface of the tongue and the insides of the cheeks. When candidal infection involves mucosal surfaces, white patches known as plaques are formed, which resemble milk curds.

The distinguishing feature of plaques due to Candida is that they are not so easily removed from the mucosa, and when the surface of the plaque is scraped away, a sore and reddened area of mucosa will be seen underneath, which may sometimes bleed.

In babies, recurrent infection is uncommon, although it may sometimes occur following reinfection from the mother's nipples during breastfeeding or from inadequately sterilized bottle teats in bottle-fed babies. Candidal infection is thought to be an important factor in the development of nappy rash.

Wearing dentures, especially if they are not taken out at night, not kept clean, or do not fit well can predispose people to thrush.

Medications causing thrush

- Immunocompromised patients are more likely to get thrush.
- Broad-spectrum antibiotic therapy can wipe out the normal bacterial flora, allowing the overgrowth of fungal infection.
- Drugs that suppresses the immune system, such as cytotoxic agents and steroids, will reduce resistance to infection leading to thrush.
- Patients using inhaled steroids for asthma are advised to rinse the throat with water after using the inhaler.

Management

- Although some reports indicate treatment is not necessary for healthy neonates, no published studies support this assertion.
- Treatment with antifungal agents should be continued for up to 2 days after the symptoms have cleared to prevent relapse and reinfection.
- Oral thrush should respond to treatment quickly. Cases failed to respond to treatment after 1 week should be referred.
- Antifungal agents:
    - Nystatin solution
    - Miconazole oral gel
    - Clotrimazole troche
    - Clotrimazole oral solution.
- Gentian violet solution should not be swallowed.
- Medication can also be directly applied to the lesions with a nonabsorbent swab or applicator. The best time to administer medication is between meals because this allows longer contact time.
- The antifungal oral gel must not be applied to the nipple of a breastfeeding woman for administration to an infant, due to the risk of choking.
- Systemic antifungal agents may be prescribed by a physician for resistant cases.

Referral points

The following cases should be referred to the doctor:

- Babies under 4 months
- Adults and older children without obvious cause
- Recurrent/persistent thrush
- Failed medication. If the symptoms have not cleared up within 1 week, patients should see their doctor.