

APHTHOUS ULCER (CANKER SORE)

Definition

A benign open sore in the mouth, which appears as a painful white or yellow sore (ulcer) surrounded by a bright red area.

Causes, incidence, and risk factors

Canker sores (aphthous ulcers) are a common form of mouth ulcer. They occur in women more often than men. They may occur at any age, but usually first appear between the ages of 10 and 40. The cause is unknown and currently there are no preventive measures. There may be an inherited predisposition to their development. There may also be an immune system link. Ulcers may develop in response to mouth injury such as dental procedures or aggressive tooth cleaning. They may occur at the site of a bite when the tongue or cheek is bitten. They can also be triggered by stress, dietary deficiencies (especially iron, folic acid, or vitamin B12), menstrual periods, hormonal changes, food allergies, and similar situations. They may occur with no identifiable cause.

Canker sores usually appear on the inner surface of the cheeks and lips, tongue, soft palate, and the base of the gums. They usually begin with a tingling or burning sensation, followed by a red spot or bump that ulcerates. Pain spontaneously decreases in 7 to 10 days, with complete healing in 1 to 3 weeks. Occasionally, a severe occurrence may be accompanied by nonspecific symptoms of illness such as fever or malaise. Recurrence is common and may continue for years.

Symptoms

- a burning or tingling sensation before other symptoms develop (prodrome or warning symptom)
- painful lesion on mucous membranes of the mouth, red spot or bump initially
- formation of open ulcer, usually small (1-2 mm to 1 cm), occasionally larger than 1 cm
- single or clusters, often appear in groups (crops)
- center appears white or yellow with fibrous texture
- halo border is bright red (a red halo may not always be present)
- may have gray membrane just prior to healing

Less common symptoms (that appear at the time of the canker but may or may not be related)

- fever
- general discomfort or uneasiness (malaise)
- swollen lymph nodes
- slow, sluggish, lethargic feeling

Signs and Tests

Diagnosis is based on the distinctive appearance of the lesion. If canker sores persist or recur, the health care provider or dentist should be consulted to rule out other causes of mouth ulcers, including erythema multiforme, drug allergies, acute herpes simplex infection, pemphigus, pemphigoid, bullous lichen planus, and other disorders. Squamous cell carcinoma may first appear as a mouth ulcer that does not heal, but this is rare.

A relatively new ulcer-like condition is hairy leukoplakia, a condition that occurs with AIDS and one that may be mistaken for the common canker.

A biopsy may need to be performed to differentiate a canker sore from other causes of mouth ulcers.

Treatment

Treatment is usually not necessary. In most cases, the condition is self-limited and healing is spontaneous. Avoid hot or spicy foods to minimize discomfort. Mild mouth washes such as salt water or over-the-counter mouth washes may aid in hygiene and increase comfort. Over-the-counter topical (applied to a localized area of the skin) medications for canker sores may reduce discomfort and soothe the ulcerated area.

Maintain good oral hygiene to prevent bacterial infection. This includes thorough brushing and flossing of the teeth and regular professional cleaning. The easiest home remedy is to apply hydrogen peroxide (one part hydrogen peroxide and one part water with a cotton swab) on the canker sore. Then dab a small amount of milk of magnesia on the canker 3-4 times a day. This is not only soothing, but appears to help healing.

Severe mouth ulcers (larger than 1 cm or lasting longer than 2 weeks) may require evaluation and treatment. In these cases topical or oral (by mouth) Tetracycline suspension may be given, with instructions to hold it in the mouth for 2 to 5 minutes before swallowing. Tetracycline is usually not prescribed for children until after all the permanent teeth have come in; if they swallow the tetracycline suspension, it can permanently discolor teeth that are still forming. Herpetic stomatitis which produces multiple painful mouth ulcers is usually treated with one of the antiviral agents such as acyclovir. Topical or oral corticosteroids are rarely used but may reduce inflammation. Dexamethasone suspension may be given with instructions to rinse the mouth and spit out; or dexamethasone, prednisone, or other corticosteroid may be given systemically.

Expectations (prognosis)

Canker sores usually heal spontaneously. The pain usually decreases in 3 or 4 days. Other symptoms disappear in 10 to 14 days.

Complications

- secondary bacterial infections (cellulitis, Ludwig's angina) (rare)
- oral cancer (cancer is not a complication but in ulcers lasting more than 2 weeks cancer may actually be the cause of the ulcer. Therefore, any ulcer lasting over 2 weeks should be evaluated by a physician)
- oral thrush or other Candida infections may occur following the use of antibiotic treatment for cankers

Calling your doctor

Apply home treatment and call your doctor if symptoms of canker sores persist or worsen, or canker sores recur more often than 2 or 3 times per year. Call your doctor if symptoms are associated with other problems such as fever, diarrhea, headache, or skin rash.