Cold sores & Mouth ulcers

Non-Prescription Drugs and Parapharmaceuticals

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Cold sores

- **Herpes labialis** ,also called **fever blisters** is caused by the herpes simplex virus (HSV). It is usually a painful, self-limiting infection of the lips, cheeks or nose or oropharyngeal mucosa (gingivostomatitis).

- The virus has two main subtypes. HSV type 1 is the cause of cold sores in more than 90% of cases. Rarely, infections may be caused by HSV type 2, which more commonly causes genital herpes infections.

Location

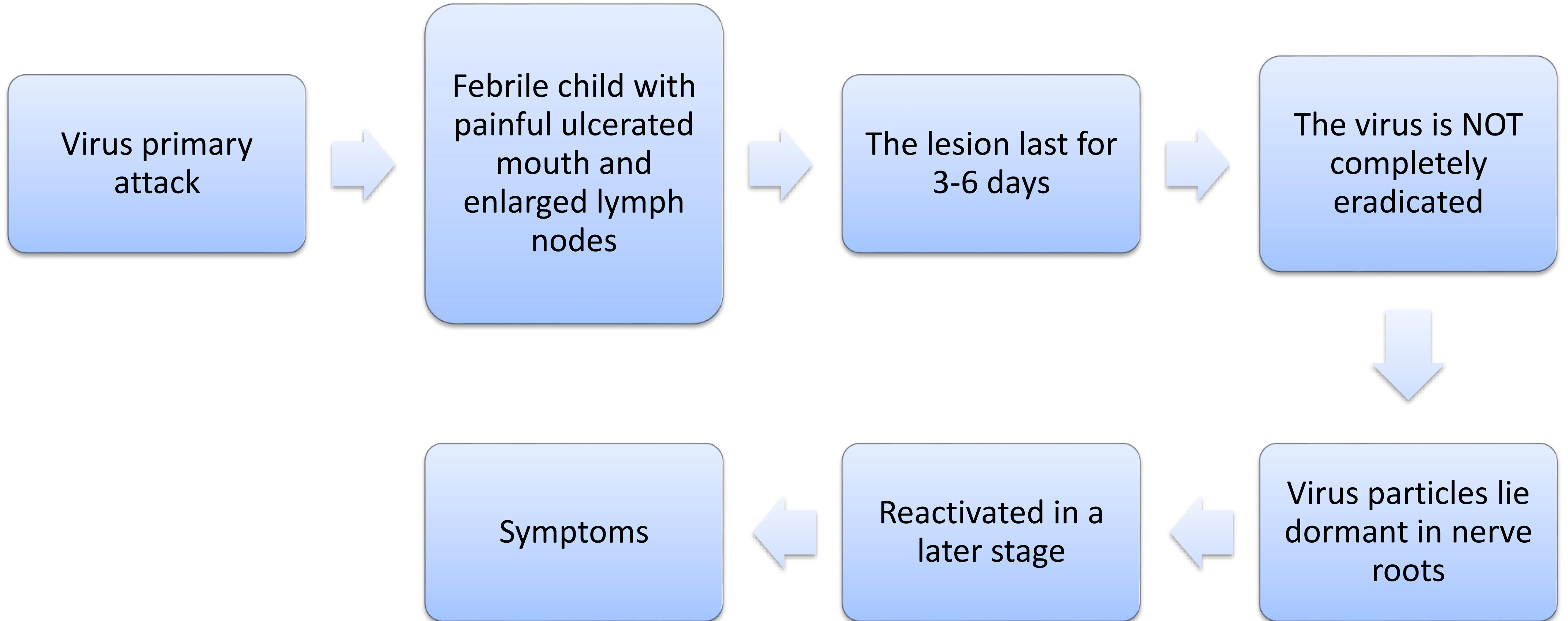
- Cold sores occur most often on the lips or face. Lesions inside the mouth or close to or affecting the eye need medical referral.

Precipitating factors

Sores can be precipitated by :

- sunlight, wind, fever (during infections such as colds and flu)
- hormonal changes such as pregnancy or menstruation
- Physical and emotional stress.

Reactivation of HSV



What are the common symptoms?

Stage 1 1 Day (Average Duration)

Tingling, itching, or burning beneath the skin (usually around the mouth or nose) may begin. **The first sensation is the ideal time to begin treatment.**

Stage 2 1-2 Days

Small red bumps begin to blister.

Stage 3 1-3 Days

The blisters fill with fluid, forming a full-scale cold sore.

Stage 4 1-3 Days

Blisters rupture, leaving shallow, reddish wounds. This is when cold sores are most contagious and painful.

Stage 5 4-14 Days

The lesion collapses, leaving a yellowish crust. The crust falls away, leaving a red, tender area.

Stage 6 4-14 Days

Redness and irritation fade as your immune system returns the cold sore to a dormant state.

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What you need to know-Age

cold sores are most commonly seen in adolescents and young adults.

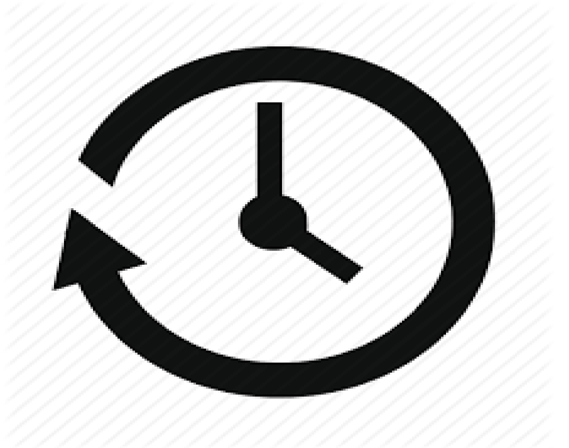
The incidence of cold sores is slightly higher in women than in men.

Recurrent cold sores occur in up to 25% of all adults and the frequency declines with age

What you need to know/Duration

- The duration of the symptoms is important as treatment with *aciclovir (acyclovir)* is of most value if started early in the course of the infection .

- Usually the infection is resolved within 1–2 weeks.
- Any lesions that have persisted longer need medical referral.



When to refer?

1. Babies and young children < 2 years
2. Failure of an established sore to resolve
3. Severe or worsening sore
4. History of frequent cold sores
5. Sore lasting longer than 2 weeks
6. Painless sore
7. Eye affected
8. Uncertain diagnosis
9. Immunocompromised patient
10. Pregnancy

Treatment

- *Aciclovir* is antiviral that reduce time to healing .

  Cream can be used by adults and children and should be applied approximately five times a day to the affected area for 5 days.
- If healing is not complete, treatment can be continued for up to 5 more days, after which medical advice should be sought if the cold sore has not resolved.

Treatment

- Patients with severe infection, or who are immunocompromised, are usually prescribed oral antiviral therapy by a doctor

Some patients who get frequent, severe cold sores either take oral antivirals long term (prophylaxis) or are given a supply to

start at the onset of symptoms

Analgesia and bland creams

- Paracetamol or ibuprofen may help with discomfort and pain.

- Local anesthetics (e.g.benzocaine) decrease pain.

- Keeping the cold sore moist (e.g. with lip balm or white soft paraffin) will prevent drying and cracking, which can predispose to secondary bacterial infection.

- If a **secondary infection develops, bacitracin in antibiotic ointments** should be recommended. If necessary, the patient should consult a physician for a systemic antibiotic prescription.

Complementary therapies

- Balm mint extract and tea tree oil applied topically may have an effect on pain, dryness and itching.

IS IT CONTAGIOUS?

- In both the initial and subsequent outbreaks, the blisters and ulcers of herpes simplex are filled with virus and are highly contagious until they heal.
- Touching a cold sore and then touching other places on your body, or another person, can cause the virus to spread.
- To prevent spreading the virus, a person with an orofacial lesion should wash their hands frequently especially after contact with the sore

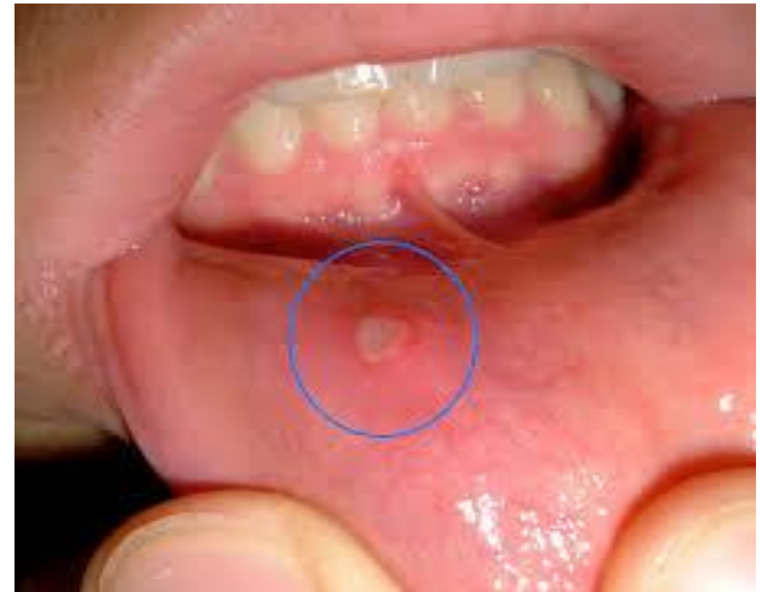
HINTS AND TIPS BOX 8.10: COLD SORES

Sun-induced cold sores	For patients in whom the sun triggers cold sores, a sun block would be the most effective prophylactic measure.
Applying products	Patients should be encouraged to use a separate towel and wash their hands after applying products because viral particles are shed from the cold sore and can be transferred to others.
Decrease transmission	Risk of transmission is highest during the first 1–4 days of symptoms, and people should be advised not to kiss others.

Practical points- Preventing cross infection

- Tell patients to wash their hands after applying treatment to the cold sore.
- Women should be careful in applying eye makeup when they have a cold sore to prevent infection affecting the eye.
- It is sensible not to share towels, toothbrushes until the cold sore has cleared up.
- Sunscreen creams (SPF 15 or above) applied to and around the lips when patients are subject to increased sun exposure.
- Sources of stress in life could be looked at to see if changes are possible

Mouth ulcer



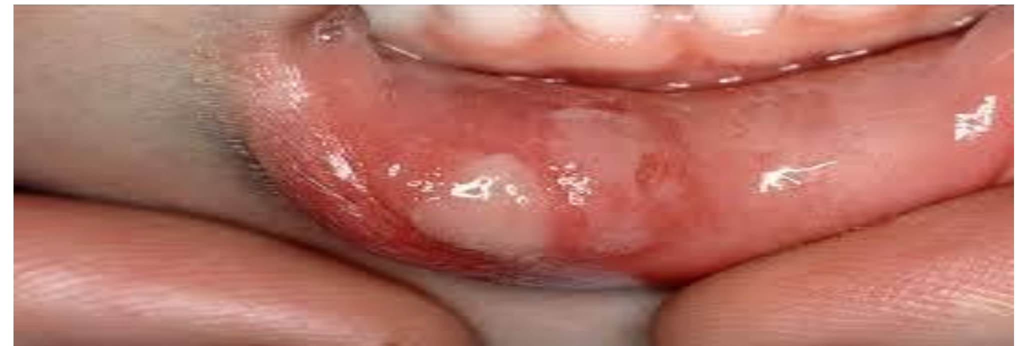
Mouth Ulcer

- Aphthous Stomatitis (mouth ulcer) is extremely common problem affecting as many as **one in five** of the population, and can be recurrent.

- They are classified as aphthous (minor or major) or herpetiform ulcers.

- Although mouth ulcers can be uncomfortable, especially when you eat, drink or brush your teeth, they are harmless.

Most cases are minor aphthous ulcers, which as self-limiting.



- Defect in the epithelium or loss in continuity of epithelium is called as ulcer.
- The term “ aphthous ” was first coined by Hippocrates as far back as 460–370 BC in reference to disorders of the mouth.
- In general usage, the word “ aphthae ” refers to the presence of an otherwise undefined ulcer.

Causes

- Infection, trauma (biting during chewing or talking)...the leading cause of trauma,
- Drug allergy, food allergy
- Deficiency of iron, zinc , vitamin B12.

- However, occasionally mouth ulcers appear as a symptom of serious disease such as carcinoma.

- The pharmacist should be aware of the signs and characteristics that indicate more serious conditions.

What you need to know

1 Age

- Minor ulcers are more common in women and occur most often between the ages of 10 and 40 years.

2 Nature of the ulcers

A. minor ulcers the lesions may be up to 5 mm in diameter and appear as a white or yellowish centre with an inflamed red outer edge.

•Common sites are the tongue margin and inside the lips and cheeks. The ulcers tend to last from 5 to 14 days

B. Major ulcers are uncommon, severe variants of the minor ones.

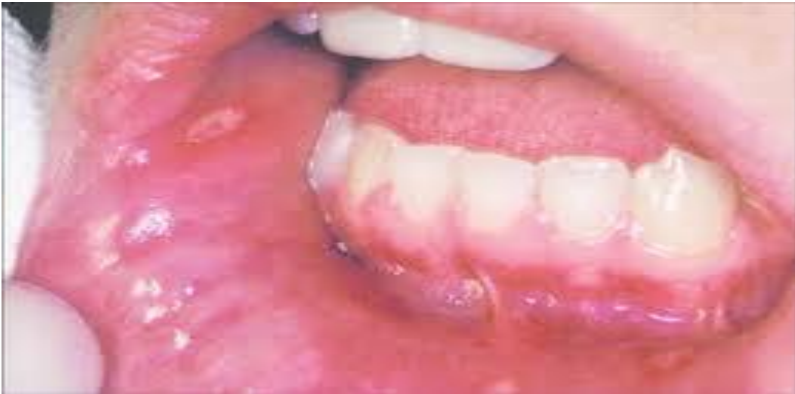
The ulcers which may be as large as 30 mm in diameter can occur in crops of up to 10.
Sites involved are the lips, cheeks, tongue, pharynx and palate.
They are more common in sufferers of ulcerative colitis.

C. Herpetiform ulcers are more numerous, smaller and, may affect the floor of the mouth and the gums.
These ulcers are called 'herpetiform' because the clinical appearance suggests a viral cause, but they are not caused by viral infection

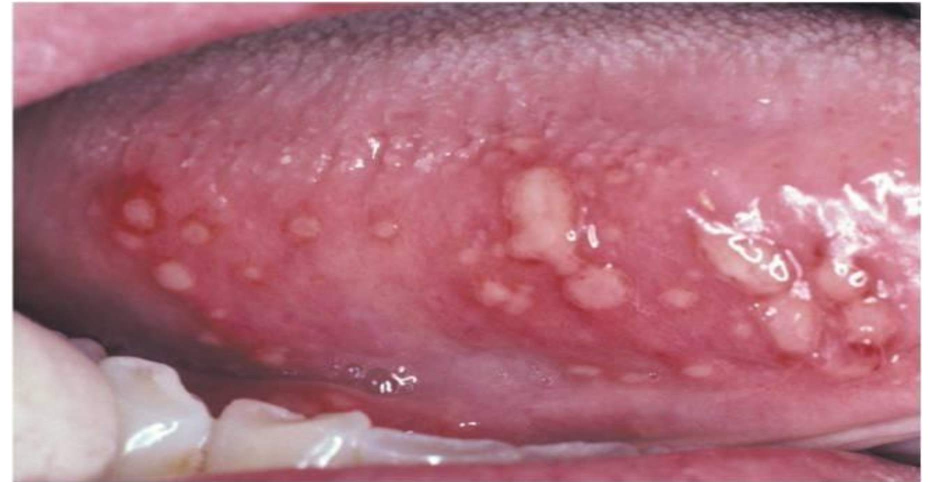
Healing generally occurs 1-2 weeks

	Minor	**Major**	**Herpetiform**
Prevalence	affects 80 % 0f the patients	10-12% of patients	8-10% of patients
Size	2-10mm	>10mm	Pinhead size
Duration	5-7 day	> 14 days	10-14 days
Shape	Round or oval	Round or oval	Round or oval may form irregular shape as they enlarge
Pain	Usually not very painful	Prolonged and painful ulceration Eating is difficult	May be very painful

Major Ulcer



Minor Ulcer



Herpetiform Ulcer

Table 7.2
Specific questions to ask the patient: Mouth ulcers

Question	Relevance
Number of ulcers	Minor aphthous ulcers (MAUs) occur singly or in small crops. A single large ulcerated area is more indicative of pathology outside the remit of the community pharmacist. Patients with numerous ulcers are more likely to be suffering from major or herpetiform ulcers rather than MAUs.
Location of ulcers	Ulcers on the side of the cheeks, tongue and inside of the lips are likely to be MAUs. Ulcers located towards the back of the mouth are more consistent with major or herpetiform ulcers.
Size and shape	Irregular-shaped ulcers tend to be caused by trauma. If trauma is not the cause, referral is necessary to exclude sinister pathology. If ulcers are large or very small, they are unlikely to be caused by MAUs.
Painless ulcers	Any patient presenting with a painless ulcer in the oral cavity must be referred. This can indicate sinister pathology such as leukoplakia or carcinoma.
Age	MAUs in young children (<10 years) are not common, and other causes such as primary infection with herpes simplex should be considered.

- **When to refer the patient?**

Encourage the patient to see a primary care provider if any of the following occur:

1. Symptoms do not improve after 7 days of treatment with oral debriding or wound-cleansing agents.
2. The lesions do not heal in 14 days.
3. Symptoms worsen during self-treatment.
4. Symptoms of systemic infection, such as fever, rash, or swelling develop.

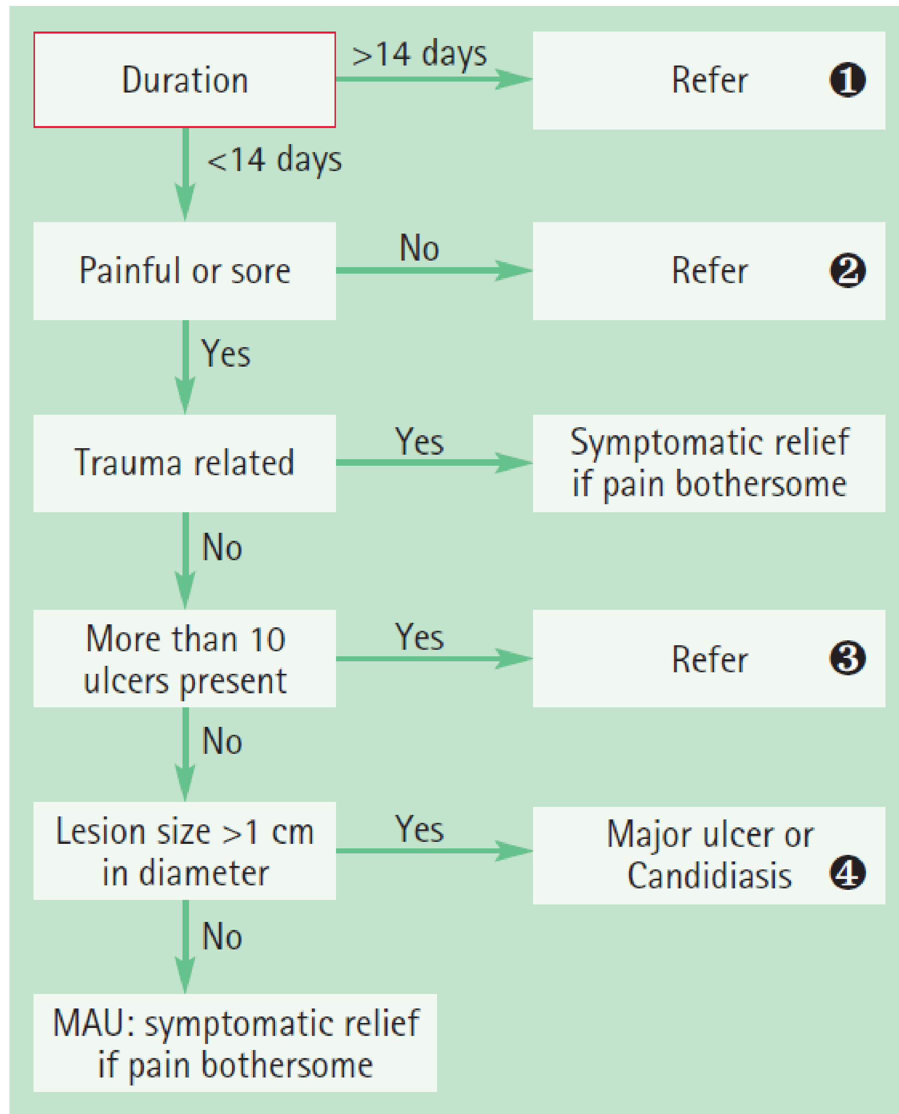


Fig. 7.6 Primer for differential diagnosis of mouth ulcers.

❶ Minor aphthous ulcers. (MAUs) normally resolve in 7 to 14 days. Ulcers that fail to heal within this time need referral to exclude other causes.

❷ Painless ulcers. These can indicate sinister pathology, especially if the patient is older than 50 years. In addition, it is likely that the ulcer will have been present for some time before the patient presented to the pharmacy.

❸ Numerous ulcers. Crops of 5 to 10 or more ulcers are rare in MAUs. Referral is necessary to determine the cause.

❹ Major ulcer or candidiasis. See Fig. 7.9 for a primer on the differential diagnosis of oral thrush.

The goals of treatment

- to provide relief from pain.
- hasten the healing of ulcers.
- decrease the frequency and severity of episodes.

Non-pharmacologic therapy

1. If a deficiency of iron, folate, or vitamin B12 is diagnosed as a contributing factor, increase consumption of foods high in these nutrients, or take nutritional supplements.
2. Avoid spicy or acidic foods until the lesions heal.
3. Avoid sharp foods that may cause increased trauma to the lesion.
4. Apply ice directly to the lesions in 10 minute increments but not longer than 20 minutes in a given hour.
5. do not drink very hot or acidic drinks, such as fruit juice

Treatment

include :

1 Antiseptics

2 Corticosteroids

3 Local anaesthetics

Chlorhexidine gluconate mouthwash:

reduces duration and severity of ulceration.

Chlorhexidine helps to prevent secondary bacterial infection
but it does not prevent recurrence.

Chlorhexidine

- It has a bitter taste and is available in peppermint as well as standard flavour.

- Regular use can stain teeth brown – an effect that is not usually permanent.

- Advising the patient to brush the teeth before using the mouthwash can reduce staining.
- The mouth should then be well rinsed with water as chlorhexidine can be inactivated by some toothpaste ingredients.

- The mouthwash should be used twice a day, rinsing 10 mL in the mouth for 1 min and continued for 48 h after symptoms have gone.

Local anaesthetics

- **e.g. lidocaine (lignocaine) and benzocaine**
- Local anaesthetic gels are often requested by patients. Although they 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. Any preparation containing a local anaesthetic becomes difficult to use when the lesions are located in inaccessible parts of the mouth

Topical corticosteroids:

Hydrocortisone and triamcinolone act locally on the ulcer to reduce inflammation and pain and to shorten healing time.

The former is used as pellets, the latter as a protective paste. To exert its effect a pellet must be held in close proximity to the ulcer until dissolved. This can be difficult when the ulcer is in an inaccessible spot. One pellet is used four times a day.

The pharmacist should explain that the pellets should not be sucked, but dissolved in contact with the ulcer.

Hyaluronic acid

- It activates tissue regeneration and influences the migration of fibroblasts and fibrinogenesis, thus making the healing of tissue easier. It performs 3 synergistic effects: anti-inflammatory, accelerates the healing process and provides a protective barrier.

- **Adults and children 3 years and older**
  <u>2 to 3 times a day after meals, for 3 to 4 weeks continuing until all symptoms have disappeared</u>
- Do not eat, drink or rinse for 30 minutes

Control of secondary infection

- Although topical antimicrobial therapy is generally not warranted in the routine management of patients with mild to moderate AS, it may be helpful for some patients with extensive oral ulceration, especially if they are using topical or oral immunosuppressive agents.

- In this setting, topical therapies that are used to control overgrowth of *Candida* or bacteria.