*ABC of palliative care*

# Mouth care, skin care, and lymphoedema

Claud Regnard, Sarah Allport, Lydia Stephenson

## Mouth care

Patients' oral problems can be kept to a minimum by good hydration, brushing the teeth with a fluoride toothpaste twice daily, and daily observation of the oral mucosa. Oral problems can reduce intake of fluid and food because of pain, altered taste, or disorders of swallowing. The first step is to manage the local problems.

**Risk factors for oral problems**

- Debility
- Dry mouth
- Chemotherapy
- Poor oral intake
- Local irradiation
- Dehydration

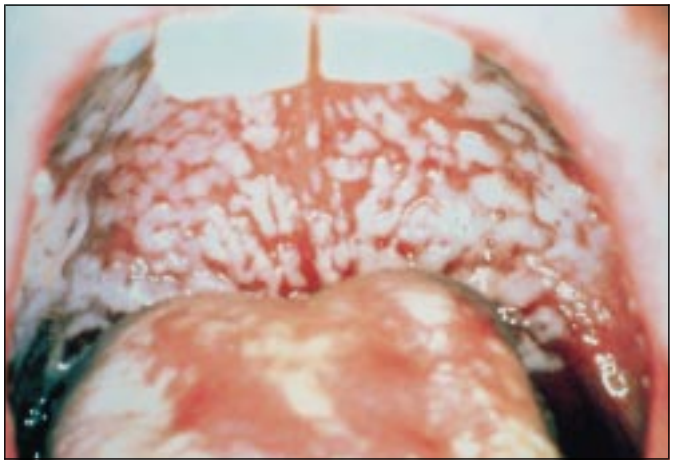
**Key questions for mouth care**

- Is infection present?
- Is the mouth dry?
- Is the mouth dirty?
- Is the mouth painful?

### Infection

Candidiasis usually presents as adherent white plaques but can also present as erythema or angular cheilitis. Nystatin suspension is the usual treatment, but in advanced disease ketoconazole 200 mg once daily for 5 days is cost effective and more convenient for patients (hepatic toxicity has not been reported for 5 day courses). Fluconazole 150 mg as a single dose is equally effective but is more expensive. Recurrent candidiasis in patients with AIDS requires prophylactic treatment with fluconazole 50 mg daily.

Oral hygiene is important, especially daily cleaning of dentures. Aphthous ulcers are common and can be helped by topical corticosteroids or tetracycline mouthwash. Severe viral infection (herpes simplex or zoster) will need aciclovir 200 mg every 4 hours for 5 days. Malignant ulcers are often associated with anaerobic bacteria that produce a foul odour; this responds to metronidazole, either as 400-500 mg taken orally or rectally every 12 hours or as a topically applied gel.



Oral candidiasis

### Dirty mouth

Loose oral debris can be removed with mouthwashes. Over the years many different mouthwashes have been advocated and then rejected for various reasons. Cider and soda water are more pleasant than most, while cool water is by far the most convenient. Teeth should be brushed at least twice daily with a fluoride toothpaste. Dental caries, if present, should prompt referral to a dentist. A coated tongue can be cleared in days with the proteolytic enzyme annanase, effectively delivered by regular chewing of unsweetened pineapple chunks (annanase remains fully active in tinned fruit).

### Dry mouth

Treatable causes include candidiasis, antimuscarinic drugs, anxiety, and dehydration. Helpful local measures include partly frozen drinks, while frequent sips or sprays of plain cold water are as effective as artificial salivas. Applying petroleum jelly to the lips prevents sore cracked lips. Glycerin, which dehydrates the mucosa further, and lemon juice, which rapidly exhausts salivary secretion, should be avoided.

### Painful mouth

In patients with head and neck tumours infection can cause sudden and severe pain with little or no signs, but it responds rapidly to systemic flucloxacillin and metronidazole. Pain from bone or nerve damage is treated as described earlier in this series. Persistent mucosal pain is helped by topical measures: some provide local protection, and others produce local anaesthesia. Severe pain due to mucositis occasionally needs systemic analgesics such as opioids, with the dose titrated against the pain.

**Local measures for oral problems**

**Infected mouth**
- Topical corticosteroids—Betamethasone 0.5 mg in 5 ml water as mouthwash or triamcinolone in carmellose paste
- Tetracycline mouthwash, 250 mg every 8 hours (contents of one capsule dissolved in 5 ml water)

**Dirty mouth**
- Regular brushing with soft toothbrush and toothpaste
- Pineapple chunks
- Cider and soda mouthwash

**Dry mouth**
- Semifrozen tonic water and gin
- Semifrozen fruit juice
- Frequent sips of cold water or water sprays
- Petroleum jelly rubbed on lips

**Painful mouth**
- Coating agents—Sucralfate suspension as mouthwash, carmellose paste, carbenoxolone
- Topical anaesthesia—Benzydamine mouthwash, choline salicylate, Mucaine, lozenges containing local anaesthetics

# Skin care

## Pressure sores

Patients at risk of pressure sores should be monitored regularly with a validated risk assessment score (such as Waterlow) and daily visual inspection of pressure areas. How a patient moves, or is moved by carers, needs to be assessed and monitored. Even with regular turning and careful lifting and positioning, specialist pressure surfaces or mattresses are sometimes needed.

*Painful pressure sore*—Gel or colloid dressings that keep the area moist reduce pain and can be left in place for several days. Topical application of benzydamine to the edges of the ulcer can also help. Painful changing of dressings can be eased by extra analgesia before each change. Inhaling a mixture of oxygen and nitrous oxide (Entonox) may help, but persistent pain may require oral diclofenac or oral morphine. Severe pain may need a subcutaneous infusion of ketamine (50-200 mg per 24 hours) or spinal analgesia.

*Odour*—Anaerobic bacteria causing odour can be reduced with systemic metronidazole 400-500 mg taken orally or rectally twice daily. Topical metronidazole gel is an expensive alternative if systemic metronidazole is not tolerated. Perfumes are unhelpful as they soon become associated with the unpleasant odour.

*Patient's prognosis*—When there is insufficient time to allow healing, care should focus on preventing worsening of pressure sores, comfortable dressings, pain relief, and reducing odour. Solutions that release chlorine, such as Eusol and Milton, seem to delay healing.

*Nutrition*—Good hydration, high protein and carbohydrate drinks, and vitamin C supplements encourage healing.

*Faecal or urinary contamination*—No pressure sore is free of bacterial contamination, but diarrhoea or urinary incontinence will make healing more difficult, and this should be addressed separately.

*Suitability of dressings*—It is important to check that the required dressings can be prescribed (listed in the *Drug Tariff*) and that someone can collect them for the patient. Planning between hospital, hospice, and community is essential and, if necessary, one care team should demonstrate the dressing technique to other teams.

## Malignant ulcers

For uncomplicated malignant ulcers, pain relief and wound care are managed in the same way as pressure sores, but many malignant ulcers present special problems requiring additional treatment.

*Bleeding ulcer*—Radiotherapy should be arranged. While awaiting treatment, or if there is no further scope for treatment, bleeding points or capillary oozing can be successfully managed by topical application of sucralfate. The suspension is placed on a non-adherent dressing and applied firmly to the bleeding area. An alternative is the topical application of tranexamic acid injection solution. The duration of action of topical adrenaline is too short to be useful in bleeding ulcers.

*Altered body image*—Odour is managed in the same way as with pressure sores, while cosmetic camouflage and filling cavities with cavity foam dressings can restore some symmetry. Both odour and asymmetry can cause social isolation, altered body image, and sexual difficulties with resultant psychosocial difficulties. Empathetic listening is often therapeutic in itself, but anxiety, anger, or depression will need specific support.

*Dirty ulcer*—If the prognosis allows, debridement can be gently achieved with polysaccharide, hydrocolloid, or hydrogel dressings. Odour is treated in the same way as for pressure sores, but, for extra masking of the odour, cling film (food wrap) can be placed over the outermost dressing.

**Risk factors for pressure sores**

- Debility
- Dyspnoea
- Incontinence
- Confusion
- Pain
- Paralysis
- Poor nutrition
- Weakness

**Likely sites of pressure damage**

- Shoulder blades
- Elbows
- Spine
- Buttocks
- Knees
- Ankles
- Heels

**Key questions in managing pressure sores**

- Is the pressure sore painful?
- Is odour present?
- Will patient's prognosis allow healing?
- Is better nutrition possible?
- Is the ulcer dirty?
- How deep is the ulcer?
- Is faecal or urinary contamination present?
- Are the dressings practical and available?

**Dressings for ulcers**

*Shallow ulcers (<5 mm deep)*—Use a moisture retaining dressing such as hydrocolloid wafers or adhesive semipermeable films

*Deep ulcers (≥5 mm)*—Use a moist cavity dressing to encourage granulation (such as calcium alginate hydrogel or cavity foam dressing)

*Heavy exudate*—Calcium alginate is preferable

*Slough and necrotic tissue*—Apply hydrocolloid or hydrogel dressing for a week, then debride gently

Malignant ulcer in 65 year old woman previously treated for breast cancer

*Excessive discharge*—High absorbency dressings such as calcium alginate take up some discharge, and the surrounding skin will need a barrier ointment. Profuse watery discharge from some ulcers can be greatly reduced by using topical high dose corticosteroids once daily for a week. If the discharge is due to an enterocutaneous fistula, a stoma bag may help if surgical diversion is not possible, but occasionally octreotide (starting dose 150-300 μg per 24 hours) can reduce the volume of the enteral discharge. Bed linen can rapidly become soiled—for patients at home, the community laundry service should be contacted, while the local authority can usually arrange for the safe and discrete collection of linen.

**Key questions in managing malignant ulcers?**

- Is the ulcer bleeding?
- Does patient have an altered body image?
- Is the ulcer dirty?
- Is discharge excessive?
- Is ulcer painful or itching?

### Itch

*Skin unusually dry or wet*—If the skin is dry avoid heat, hot baths, drying agents such as calamine, and rough clothing. Moisturise the skin regularly with an emollient such as aqueous cream. For wet skin, use barrier cream in skin folds and, after washing, dry the skin without rubbing. Reduce sweating by treating infection or reduce fever by cooling. Night sweats can be difficult to treat: thioridazine (10-30 mg at night), corticosteroids, cimetidine, and non-steroidal anti-inflammatory drugs have shown some success. Dermatitis and atopic eczema usually cause dry skin but can cause wetness if the irritation is acute or has been excoriated. The associated itch can be rapidly eased with topical corticosteroids—the risk of systemic absorption is much less of a problem in advanced disease.

*Skin colour change*—Consider iron deficiency anaemia and jaundice as causes. Jaundice due to biliary obstruction caused by malignancy can be relieved by stenting or temporarily eased by high dose dexamethasone. Darkening of the skin may be due to poor venous drainage, ischaemia, or local tumour.

*Skin damaged*—Consider infection, pressure damage, and skin disorders.

*Persistent itch*—When itch persists despite local measures (emollients such as aqueous cream, with topical corticosteroids if necessary) systemic drug therapy can be tried: antihistamines, chlorpromazine, cholestyramine, cimetidine, phenobarbitone, and rifampicin help some patients, and, recently, ondansetron has been suggested for itch secondary to cholestatic jaundice. The variety of drugs emphasises the uncertain success of drug treatments and reinforces the importance of local measures.

**Key questions in managing itch**

- Is skin drier or wetter than usual?
- Has skin colour changed?
- Is skin abnormal?
- Is itch persisting despite local measures?

## Lymphoedema

Low protein oedemas (such as those due to heart failure, dependency, or hypoalbuminaemia) are soft and are managed by low compression support, elevation, and treating the underlying cause. Lymphoedema, however, results from reduced lymphatic drainage, which can be caused by lymphatic obstruction due to tumour, infection, or scarring.

Affected tissues are initially soft, and the lymphoedema may reduce or disappear overnight, but within a year or two the tissues become firm with deep folds, a dry roughened skin, and, eventually, hyperkeratosis and recurrent cellulitis. Patients may complain of stiffness or pain from related conditions (such as cellulitis or a heavy limb), but lymphoedema itself is not painful. Lymphoedema alone never causes skin ulceration or nerve damage, and other causes must be sought if these are present.

Lymphoedema and recurrent disease in 70 year old woman previously treated for breast cancer by means of surgery and radiotherapy

**Cornerstones of treating lymphoedema (SETS)**

- **S**kin care
- **E**xercise and movement
- **T**runcal massage
- **S**upport bandaging or hosiery

### Infection

Cellulitis is usually due to penicillin sensitive *Streptococcus*, although skin swabs are often unhelpful. The infection often causes only mild erythema and increased warmth, although acute infection can occur. Prompt treatment with penicillin V

500 mg every 6 hours or co-amoxiclav 250/125 mg every 8 hours will clear the infection within days. For patients allergic to penicillin, erythromycin seems equally effective.

With repeated infections, patients should have a supply of antibiotics at home to take at the first sign of infection. Some patients need to take antibiotics for several months (penicillin V 500 mg daily). A few patients have a severe attack with fever, and initial treatment for these patients should be parenteral penicillin or erythromycin.

Fungal infection should be considered; topical antifungal drugs are then indicated.

**Skin care**

Skin care is essential to reduce the risk of cellulitis. Dry skin should be moisturised and skin breaks dressed with antiseptic cream. An infective dermatitis that is weeping needs soaking with potassium permanganate solution. Persistent leakage of fluid suggests lymphorrhoea, which is most effectively treated by an intensive one to two weeks of massage and bandaging as described below. Before bandaging wet skin, a non-adherent dressing should be applied and the bandaging changed daily or more often if it becomes soaked.

**Reducing lymphoedema**

*Is ischaemia present?* If the ratio of posterior tibial artery pressure to brachial artery pressure (measured with Doppler ultrasound scanning) is 0.8 or less, bandages or compression hosiery should not be used.

*Is venous obstruction present?* If the oedema has occurred within days, venous obstruction by thrombosis or tumour must be excluded.

*Is massage possible?* This is possible unless the trunk skin is extensively affected by infection, tumour, or other disease. Massage starts in a trunk quadrant free of lymphoedema before moving to the lymphoedematous side. The massage is done gently by hand or electrical massager, and no talc or oil is used. The aim is to move lymph from a lymphoedematous area to one that is clear of lymphoedema. Twice daily massage for about 20 minutes by the patient or carer is sufficient for most lymphoedema.

*Is there time to reduce lymphoedema?* It takes at least a month to achieve a satisfactory reduction. If a patient's life expectancy is less than this, treatment is unchanged but the aim is to make the patient comfortable and to prevent worsening of the affected area.

*Is the lymphoedema midline?* Massage alone is used, although for genital and perineal lymphoedema, made to measure pants, tights, or scrotal supports can also be used.

*Is support indicated?* If bandages are indicated these should be made from high compression, low stretch materials and applied to give a graduated pressure that is highest distally. The bandages are usually applied daily in a single layer but can be applied in several layers for more resistant lymphoedema. With hosiery, tubular supports must be avoided as they often roll and worsen lymphoedema. Class 1-3 hosiery can be prescribed in the community, but many patients require higher compressions, which are available only through hospital prescriptions. Made to measure hosiery is not usually necessary or practical, but it is useful in the few patients with unusually shaped limbs.

Compression pumps are of limited value and should be restricted to those few patients who have no oedema of the nearest trunk quadrant.

**Key questions in managing lymphoedema**

- Is infection present?
- Is skin drier or wetter than usual?
- Is ischaemia present?
- Is venous obstruction present?
- Is massage possible?
- Will patient's prognosis allow reduction of lymphoedema?
- Is lymphoedema in midline only?
- Is support indicated?

**Support bandaging and hosiery**

**Bandaging**

*Indications*
- Fragile or damaged skin
- Limb too large to fit hosiery
- Distorted limb shape
- Pain in site of lymphoedema

*Contraindications*
- Ratio of posterior tibial:branchial artery pressures $< 0.8$
- Ventricular failure
- Recent peripheral vein thrombosis

*Caution with*
- Microcirculatory problems
- Absence of sensation

**Hosiery**

*Indications*
- Intact skin
- Patient able to fit and remove it
- Limb size and shape allow fitting

*Contraindications and cautions*
- As for bandaging

**Even large volumes of lymphoedema can be reduced with massage and support: 13 litres were removed from the leg shown left to achieve the result shown right. In uncomplicated lymphoedema 40-60% reductions in volume can be cost effectively achieved and maintained for years**

Claud Regnard is consultant in palliative medicine, Sarah Allport is ward manager, and Lydia Stephenson is physiotherapist and director of educational development at St Oswald's Hospice, Newcastle upon Tyne.

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