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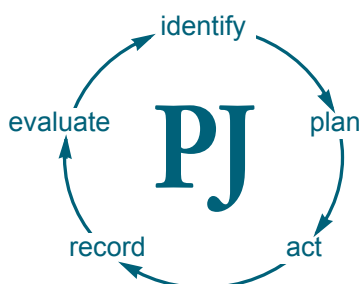
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ORAL CARE

(3) ORAL PROBLEMS

By Derrick Garwood, BDS

This article looks at a range of oral conditions that pharmacists may be asked to advise on



identify gaps in your knowledge

1. What is a typical symptom of early stage periodontal disease?
2. What advice would you give to someone who has had a tooth extracted, but the socket is continuing to bleed?
3. How would you deal with a person whose tooth has been knocked out?

This article relates to the Royal Pharmaceutical Society's core competency of "appropriate advice, referral or selection of treatment" (see "Medicines, ethics and practice — a guide for pharmacists", number 26, July 2002, pp105–6). You should consider how it will be of value to your practice.

Irregular visitors to the dentist experiencing oral problems will often consult an alternative source of health care information before making an appointment, and the pharmacist is a likely candidate. In many cases the person will need to be referred to a dentist, but pharmacists can nevertheless provide much sound advice and guidance.

DENTAL PROBLEMS

An enormous number of conditions can cause pain in the mouth: from caries to Sjögren's syndrome (an autoimmune disease that reduces secretions from glands, causing dry eyes and mouth) and from traumatic ulcers to a fractured jaw. Only a dentist can make a differential diagnosis and undertake any necessary treatment or, if necessary, refer the patient to a specialist. Few painful mouth conditions are self-limiting and one or two can ultimately be life-threatening, so any customer with dental pain should be advised to make an emergency appointment as soon as possible. However, suitable analgesics can be recommended if required. Clove oil can be used to alleviate pain caused by caries, but repeated application can damage the gingivae.

A "hole" in a tooth Patients are normally only aware of the carious process once a sizeable cavity has developed and the affected tooth needs filling. Caries begins with the loss of minerals from the enamel surface, creating a "white spot" lesion, and at this stage the process can be reversed by dietary changes (ie, reduced sugar consumption) and improved oral hygiene. Pharmacists can advise on the prevention of future decay, which will be discussed in the next article.

Bleeding gums Periodontal disease is extremely widespread. Initially it affects the gums (gingivae), but if left untreated it can spread to the periodontal ligament and bony socket, leading to the loss of teeth. When only the gums are involved the condition may be termed gingivitis; once the supporting structures are affected it is called periodontitis. The cause of both conditions is toxins and enzymes, produced by plaque bacteria, which inflame the tissues and eventually bring about their destruction. Progress is slow and

painless, but even during early chronic gingivitis, customers may notice that their gums tend to bleed (especially when brushing) and halitosis is present. The gums can also appear red and swollen. Pharmacists can make people aware that treatment at this stage is straightforward consisting, essentially, of a thorough oral hygiene regimen and regular scaling and polishing. This can prevent the condition progressing to the point where teeth become loose and cannot be saved. If ignored, a gap or periodontal pocket forms between the tooth and the gum, which gradually extends towards the tip of the root. As a short term measure, dentists may prescribe or recommend a chlorhexidine gluconate mouthwash or gel. Chronic periodontitis is treated by scaling and root planing. As an adjunct to this treatment, a three-month course of low dose doxycycline (20mg twice daily) is sometimes prescribed.

The following factors increase susceptibility to periodontal disease and individuals may be able to modify some of these to reduce their risk:

- Smoking
- Poor nutrition
- Stress
- Medication that reduces salivary secretion, such as oral contraceptives and antidepressants
- Pregnancy (hormonal changes)
- Conditions affecting the immune system
- Genetic predisposition

Swollen face or cheek The combination of a swollen face and an intense, dull, throbbing pain associated with a particular tooth indicates the development of a dental abscess. This arises when the pulp has died and infection has spread through the apex of the root to the surrounding periapical tissues. One effect is to raise the tooth in its socket, so that it becomes tender to bite upon, and it may also feel loose. Because the pain can be severe, a strong over-the-counter analgesic, such as a combination of paracetamol and codeine, can be taken.

The person should be referred to a dentist at once. The reduced pH of the tissues caused by inflammation renders local anaesthetic ineffective and injecting into the tissues is likely to spread the infection so initial treatment is likely to take the form of a prescription for antibiotics (typically phenoxymethylpenicillin 250mg four times daily or cefalexin 250mg four times daily) and instructions to rinse frequently with warm salty mouthwashes. Once the acute phase has subsided, it is possible to treat the tooth (if appropriate) or to extract it.

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Bleeding socket Patients purchasing an over-the-counter analgesic (eg, paracetamol or ibuprofen) after an extraction may be concerned that the socket is still oozing blood. In this event, they should roll up a clean piece of gauze to form a pad, place it over the socket and bite firmly on it for 15 to 20 minutes; this is normally sufficient to effect haemostasis. Should bleeding continue for more than an hour they should return to the surgery, because it may be necessary to insert a suture.

Dentists generally advise patients to avoid rinsing the mouth, spitting, smoking or drinking hot drinks for 24 hours after an extraction to avoid dislodging the clot. Sucking through a straw can also disturb the clot. Any swelling can be treated by applying ice to the face in the area of the extraction. After the first 24 hours, the socket can be gently rinsed with salt water (one teaspoon of salt in a cup of warm water) after meals and at bedtime. Proprietary rinses should not be used because they can irritate the extraction site.

Wisdom teeth Wisdom teeth are the third molars at the back of the mouth that usually emerge during the late teens or early twenties. In some cases, wisdom teeth fail to erupt into the correct position either because they are angled incorrectly or there is insufficient room, and the tooth is said to be "impacted". Sometimes impacted molars need to be extracted, especially if they cause constant pain.

The tissues around a partially erupted wisdom tooth often become inflamed and swollen, a condition known as pericoronitis. The pain and discomfort may sometimes be relieved by taking an OTC analgesic and using warm salt water rinses, but the application of trichloroacetic acid by a dentist may be required to obtain relief.

Broken crown Although a dental crown should last between five and 15 years, sometimes they can fracture or become detached. Emergency dental kits often contain temporary dental cement that can be used until the person can get to a dentist.

Sensitive teeth Hot, cold, sweet or sour foods and drinks can trigger sharp, sudden pain in sensitive teeth. The most common cause of sensitivity is that the dentine has become exposed. This can be due, for example, to brushing too vigorously with a backwards and forwards motion (wearing away the enamel or cementum), or to the gingival recession that results from periodontal disease or a build up of plaque. A person with sensitive teeth needs to maintain good oral hygiene, but might be advised to switch to a softer toothbrush and use a desensitising toothpaste. Desensitising agents (eg, potassium nitrate and strontium chloride) work by blocking the dentinal tubules, but usually require two or three weeks of use before any benefit is realised. Acidic foods that can erode enamel should be avoided. Dentists can treat a sensitive tooth by the topical application of varnish or sealant to the dentine or root.

Stained teeth Tea, coffee, red wine and smoking can all stain enamel. Teeth can also become discoloured or dull with age. Tooth whitening toothpastes can bring about an improvement in appearance because they incorporate abrasive particles which have been specially designed to remove surface stains. Unlike bleaching agents, however, they do not alter the shade of the tooth and can scratch the enamel, so prolonged use is not recommended. Tooth whitening or bleaching involves the topical application of hydrogen peroxide to lighten the colour. If carried out in the dental surgery a 35 per cent concentration of hydrogen peroxide is used; home whitening (under the supervision of a dentist) takes much longer and uses 10 to 15 per cent carbamide peroxide, which releases hydrogen peroxide when applied. The aesthetic improvement can be striking and the procedure has been proved harmless, but the British government has classified tooth whitening products as cosmetics, which are not permitted to contain more than 0.1 per cent hydrogen peroxide. Therefore these products are technically illegal in the UK (unlike the rest of Europe) but many dentists do offer the service and there is a vociferous campaign for the law to be changed.

MOUTH ULCERS

Mouth ulcers are extremely common and in most cases pose no risk to health. Various conditions may be responsible and some of the most frequently encountered are described below.

Aphthous ulcers Aphthous ulcers are the recurrent small ulcers that repeatedly affect many otherwise healthy people, particularly at times of stress. Round and 1 to 2 mm in diameter, they appear either singly or in clusters as greyish-white or yellow craters surrounded by a raised red rim. The pain generated on eating and drinking can be totally disproportionate to their size. To date, the aetiology is not completely understood, although an autoimmune phenomenon is believed to be responsible.

Normally, the level of discomfort drops after three to four days and the ulcers heal within a fortnight. In the meantime, it is best to avoid hot or spicy foods and to rinse the mouth regularly with warm, salty water. Proprietary remedies in the form of mouthwashes, lozenges and gels, containing ingredients such as choline salicylate and benzydamine hydrochloride, may be beneficial. Gelatin paste or powder containing carmellose sodium (eg, Orabase, Orahesive) adhere to the oral mucosa and effectively protect the ulcer site, but can be difficult to apply. Topical corticosteroids can be effective, especially if applied early.

The course of the condition is familiar to most sufferers, and they only need to visit a dentist if:

- An ulcer is larger than 1cm in diameter
- An ulcer persists for longer than 14 days
- An ulcer has uneven coloration
- An ulcer causes no pain or discomfort
- They suffer from diabetes
- They are taking medication for another condition

Traumatic ulcers Over-zealous toothbrushing or spicy food can damage the oral mucous membrane and give rise to traumatic ulcers, which appear similar to aphthous ulcers except that their size and shape are more variable. The same guidelines regarding treatment and visiting a dentist apply, but an appointment should also be made if repeated ulceration is caused by, for example, a broken tooth or poorly fitting dentures.

Acute necrotising ulcerative gingivitis Young adults may seek relief from pain caused by multiple ulcers originating on the tips of the gum between the teeth, and which may be so severe that talking and eating become almost impossible. The gums are sore, swollen and inflamed, with a tendency to bleed easily. Often the victim feels generally unwell and suffers from halitosis that has a distinctive unpleasant odour.

These symptoms are characteristic of the destructive condition acute necrotising ulcerative gingivitis (commonly known as trench mouth or Vincent's disease) and sufferers should be referred to a dentist immediately. It may be necessary to prescribe antibiotics (metronidazole 200mg three times a day or phenoxymethylpenicillin 250mg four times a day) before undertaking a thorough scale and polish to remove plaque, calculus and necrotic tissue. The damage resulting from an initial attack makes recurrence likely, so exemplary oral hygiene becomes essential, and it is desirable to reduce contributory factors such as acute emotional stress, smoking, fatigue and poor nutrition.

HALITOSIS

According to the British Dental Association, the UK spends £258m each year on mouth fresheners. It is difficult for an individual to judge whether or not he or she has bad breath and often the best way to find out is to ask someone. Many people are aware of having offensive breath occasionally, but regular purchasers of breath freshening products should see a dentist to have their problem investigated, because it can indicate serious conditions such as diabetes, liver failure or kidney failure. That said, up to 90 per cent of halitosis is dental in origin, caused by oral bacteria producing volatile sulphur-containing compounds as a result of oral neglect, caries or periodontal disease. Treatment in these cases is aimed at eliminating the underlying cause and improving oral hygiene.

DRY MOUTH

Salivary flow rate and composition are affected by factors such as age and nutritional state. When salivary flow decreases to about 50 per cent of normal, the mouth feels dry (xerostomia). Causes of decreased salivary flow include salivary gland disease, medicines with antimuscarinic effects and irradiation of the head or neck.

Problems associated with dry mouth include soreness, difficulty in swallowing, speech problems and a sore throat. Without enough saliva to lubricate the mouth, neutralise plaque acids and facilitate the remineralisation of enamel, tooth decay and gum disease are more likely, and pharmacists can help by encouraging the sufferer to eat less sugary foods, practise good oral hygiene and visit the dentist regularly. The incidence of ulceration or infection of the oral mucosa also increases with dry mouth.

Among the helpful tips that pharmacists can give to relieve dryness are chewing sugar free gum to stimulate salivary flow, sucking ice or sugar free pastilles and taking frequent sips of cool water. When dispensing drugs that can cause dry mouth (eg, antidepressants, antipsychotics, sedating antihistamines), pharmacists should check that the patient is aware of measures to help relieve this side effect.

Saliva substitutes are useful but most have only Advisory Committee on Borderline Substances approval for use in patients suffering from sicca syndrome (a condition in which there is inadequate secretion of tears and saliva) or salivary gland impairment, or who have had radiotherapy. One product, Luborant, is available on the National Health Service for any dry mouth condition.

THRUSH

Oral candida infection can occur on the tongue, palate, cheeks or lips. In adults, it commonly occurs after a course of antibiotics when the commensal bacteria, which normally keep candida in check, have been killed. However, other causative factors include irritation from poorly fitting dentures, diabetes, corticosteroid medication and immune deficiency diseases (eg, HIV).

The infection appears as creamy white patches, which gradually coalesce, and can sometimes be painful. Other accompanying symptoms include loss of appetite and malaise. Although not usually serious, it is possible for the infection to spread to the throat and oesophagus. Infections are usually treated with topical antifungals. Nystatin or amphotericin lozenges are allowed to dissolve slowly in the mouth, and have the advantage that they are not absorbed from the gastrointestinal tract. Miconazole gel may also be applied topically, but can be absorbed to some degree and drug interactions should be considered.

LICHEN PLANUS

Over one per cent of the population has lichen planus, a chronic autoimmune disease that predominantly affects the skin and mouth. Oral lichen planus appears as patches of fine white striations, papules or plaques on the inside of the cheeks, gingivae and tongue. It is generally more difficult to treat and lasts longer than skin lichen planus. The aetiology of the disease is unknown and severe cases can cause painful ulcers, a burning sensation and redness.

Although there is no known cure, some treatments (commonly topical corticosteroids) can have a palliative effect. In some cases, the mouth can be too sore for effective brushing and the dentist may recommend using a mouthwash instead. This should be low in alcohol to avoid a burning sensation during use. Dentists also recommend that people with oral lichen planus have their teeth scaled and polished at frequent intervals and attend regular dental check-ups, because of the increased risk of squamous cell carcinoma.

ORAL CANCER

Pharmacists must be aware of oral cancer because early detection can increase the chances of successful treatment. The main causes of oral cancer are tobacco use and alcohol consumption. People with

any of the following symptoms should be referred to their dentist:

- A sore that does not heal or that bleeds easily
- Colour changes of the mucosa or gums, eg, the appearance of red or white spots
- A lump, thickening or rough spot in the mouth
- Pain or numbness affecting the mouth or lips
- Difficulty in chewing, swallowing or speaking
- A change in bite

FIRST AID

“Knocked out” tooth Many anterior teeth are avulsed (knocked out intact) as a result of accidents or sports injuries, particularly in children. A permanent tooth that is promptly reimplanted may be successfully retained for many years, but no attempt should be made to reimplant a deciduous (primary) tooth because this may damage the tooth’s permanent successor in the gum. The chances of successful reimplantation are increased if the correct procedure is followed. The avulsed tooth should be handled by the crown and rinsed gently under running water, taking care not to touch the root. The tooth must not be washed with soap, scrubbed, dried, or wrapped in a tissue or cloth. The person should then carefully reposition the tooth in its socket using gentle finger pressure. If this is not possible, the tooth can be placed either in the person’s mouth between the gingivae and the cheek, or in a clean container of cold milk. In either case a dentist should be seen as soon as possible, ideally within 30 minutes.

Providing re-implantation is successful, the dentist will splint the tooth in position. The splint is maintained until the socket heals and is capable of providing firm support. The tooth must subsequently be monitored for signs of discoloration or increased mobility, which indicate that further treatment is required.

Soft tissue injuries Falls and accidents often lead to puncture wounds, tears or lacerations of the cheeks or lips, the bleeding from which can be spectacularly profuse. Worried enquirers should be told that applying pressure is generally sufficient to staunch bleeding, but the victim should see a dentist or go to an accident and emergency department for thorough debridement of the wound and to check there are no foreign bodies embedded in the tissues.

Oral body piercing Piercing of the cheeks, lower and upper lip and particularly the tongue, is becoming increasingly common. Worryingly, this is sometimes performed by unlicensed practitioners. Tongue piercing usually involves puncturing the tongue with a needle placed inside a plastic sheath so that the needle can be removed and replaced by a temporary piece of jewellery. The temporary piece is longer than “permanent” jewellery to allow for swelling, and is worn for between three and six weeks. The tongue takes four to six weeks to heal, during which the mouth should be regularly rinsed with salt water. Smoking, alcohol and spicy foods should be avoided.

Once healed, the jewellery and tongue should be cleaned after every meal. The risks of tongue piercing include loss of taste, numbness, decreased mobility and irritation of the oral tissues, but the most common symptoms include pain, swelling and infection. If such complications occur, the person should be referred to a dentist or the local accident and emergency department immediately, because of the danger of possible airway occlusion.

action : practice points

1. Try to list at least five possible causes of aphthous ulcers.
2. Review the oropharyngeal products available by looking at section 12.3 of the British National Formulary.
3. Train a member of staff in what advice can be given if a person has a tooth knocked out.

evaluate

How could your learning have been more effective?
What will you do now and how will this be achieved?

