

Chapter 1

Introduction

LEARNING OUTCOMES

At the end of this chapter you should have a clear understanding of:

- Why conscious sedation can be offered as part of treatment planning.

Patients deserve to receive dental care to suit their needs, therefore offering a form of conscious sedation can be an appreciable part of treatment planning. Patients' needs vary, with some being able to accept dental treatment without any adjuncts; however, others actively avoid attending a dentist due to fear. Whereas many patients who attend the dentist declare themselves anxious in a dental environment, a small percentage of patients are classified as being dental phobic. Anxiety is a normal emotion which can be experienced at different levels dependent upon the treatments being received or situations encountered.

The appropriate provision of conscious sedation, often referred to as dental sedation or shortened to sedation, whether in intravenous, inhalation or oral transmucosal (off licence) form, helps to overcome patients' fears and anxieties, but not always their phobia. However, by accepting conscious sedation they are able to undergo the dental care required to maintain a healthy mouth. These forms of conscious sedation are explained in detail in Chapter 5.

Apart from fear and costs, other reasons for patients' non-attendance can be attributed to a lack of dentists in their area, difficulty registering with a dentist or that they are unable to access one due to factors such as mobility problems.

DEFINITION OF CONSCIOUS SEDATION

Conscious sedation is defined as ‘a technique in which the use of a drug or drugs produces a state of depression of the central nervous system enabling treatment to be carried out, but during which verbal contact with the patient is maintained throughout the period of sedation. The drugs and techniques used to provide conscious sedation for dental treatment should carry a margin of safety wide enough to render loss of consciousness unlikely.’ This definition was originally suggested in the 1978 Wylie Report and has been applied ever since by many organisations associated with regulating the practice of conscious sedation [1]. It means that patients must remain conscious and are able to understand and respond to any requests, for example if the patient is asked to take a few deep breaths they are able to do so. Deep sedation is not provided, as an agent that causes any loss of consciousness is classed as a general anaesthetic and compromises patient safety. The definition explains the state of conscious sedation, but not how it should be achieved. Nevertheless, it is widely recognised that clinicians use different techniques, with one or more drugs being administered through different routes, all of which provide patients with safe sedation.

WHY DENTAL SEDATION IS PROVIDED

Humanitarian reasons

For patients who suffer anxiety and phobia regarding treatment, sedation techniques can help them to accept it.

Anxiety and phobia

Anxiety is a state of unease that a person can often relate to because of the memories of whatever is causing them to feel anxious. This existing memory may be something that was experienced by the patient or it could be a translated experience from their family, friends or the media. Very often the patient is able to explain and relate to the specific cause or occasion in their life that results in their anxiety when faced with a similar situation/experience. As anxiety is controllable to a degree, patients who are anxious will attend the dentist for treatment and with good patient management undergo treatment, with or without the aid of sedation, depending upon their treatment plan. These patients are often found to have sweaty palms and an elevated heart rate, so monitoring their vital signs is very important to ensure their well-being.

Most patients are worried or concerned when attending the dentist, whilst some are actually frightened. Feelings of fear are a major contributing factor to

how elevated a person's anxiety level will be. Basic fears experienced by patients are based on the following factors:

- **Pain.** Nobody likes pain. Patients can associate the dentist with pain and think/feel that they will experience some pain during their treatment.
- **Fear of the unknown.** Not knowing what is going to happen allows a person's imagination to flourish. Patients who associate the dentist with discomfort may think that they will experience pain when receiving treatment.
- **Surrendering oneself into the total care of another.** This could possibly make a person feel helpless and dependent, leading to them feeling trapped and not in control.
- **Bodily change and disfigurement.** Some dental treatments can lead to an irreversible change in the person's appearance. Patients may fear that it could alter their appearance drastically and they would not be happy with this.
- **Claustrophobia.** During treatment lots of instruments are used in the patient's mouth. Some patients find this intolerable and are concerned that an item could be lost in their airway or that their mouth may fill with debris, making it impossible for them to breathe.

Phobia is an abnormal, deep-rooted, long-lasting fear of something which rarely goes away, making it very difficult to manage and treat someone who experiences this in the surgery. It is very hard to overcome this condition or to alter the way the patient thinks and feels, and in certain cases cognitive therapy may prove useful. The cause of phobia is usually deep rooted and is often initiated from a previous experience that the patient cannot recall (i.e. something that happened at a very early age which is now embedded in their subconscious). The patient quite often cannot explain its origin or why they are phobic about a specific thing. They have no control over it. This category of patient may never visit the dentist or will only do so when they are in extreme pain. If they do, they very rarely return for follow-up treatment once they are pain free.

It is only normal to feel anxious when attending the dentist and anxiety is a feeling which most people encounter. However, a small percentage of the population is dental phobic, with the condition being more common amongst women. Dental phobia starts in childhood or during adolescence and can be associated with the fears felt by parents. The parents' phobia/fear can be transferred to the child by observation and the way they respond and talk about the dentist. It may also be associated with the fear of blood, injury or hospitals, due to a personal experience. Some phobias can occur on their own without there being a rational explanation for their presence. Patients who are classed as dental phobic particularly fear dental injections and the hand-piece. If treatment is possible, the patient reacts by tensing their muscles, expecting more pain than they actually experience during treatment. Research has shown that patients who are dental phobic may have the same level of pain tolerance as patients who are not dental phobic. However, if their pain threshold is lower, or even if their threshold is the same, they feel more pain.

Naturally, patients' level of phobia can vary and affect them differently. Some dental phobics can cope with the unpleasant symptoms they feel at the thought of attending the dentist, whereas others would rather extract their own teeth and be in pain than visit a dentist. Unfortunately, some dental phobics also have a sensitive gag reflex. This action is normal and provides protection against swallowing objects or substances that may be dangerous. However, a hypersensitive gag reflex can be a problem, especially when it encompasses all sorts of foreign objects (e.g. aspirating tips and water from the hand-piece) in the mouth. This makes treatment difficult because of constant retching, which affects the patient's cooperation and leads to concern that they may choke.

Patients who have a dental phobia can benefit from treatment with conscious sedation, as any form will reduce their anxiety and relax them. In the case of intravenous sedation, which has an anterograde amnesic effect, most patients will not remember their treatment despite being aware of it at the time. However, excellent patient management is essential, with lots of tender loving care being provided. It must be recognised that dental-phobic patients will be poor attendees, whilst some may never accept treatment, even with the aid of conscious sedation. If they do, they will be very difficult to manage.

Physiological reasons

When a person experiences pain or anxiety, it can lead to their sympathetic nervous system overreacting, possibly resulting in hypertension, tachycardia and so on. This can have an adverse effect on their myocardium, especially in the middle-aged and patients with pre-existing hypertension and coronary artery disease, as it places additional strain on their heart, which could lead to an emergency situation. Providing a form of conscious sedation to this category of patient allows them to receive treatment without unnecessary strain being placed on their myocardium. The reason this occurs is attributed to whichever method of conscious sedation is used, as its mode of action on the body will relax the patient and reduce their anxiety. This causes their sympathetic nervous system to work normally, with little or no reaction, thus also reducing the risk of a medical emergency.

Complex dental treatment

Most patients attending the dentist will happily receive routine treatment without the aid of conscious sedation. However, on rare occasions they may require an unusual procedure such as minor oral surgery. This can be more stressful, more complex and may take longer than routine treatment. A form of conscious sedation can be offered at the treatment-planning stage, or the patient may request it. This makes their treatment easier to cope with and less stressful for them and the team.

When managing and planning treatment for patients, it is vital to remember that their needs and safety are paramount, that patients are individuals with differing needs and that these can change and evolve for whatever reasons. At all times it is important to respect a patient's diversity and right to choose, in order to forge good relationships with them and provide a patient-centred approach [1].

REFERENCE

1. Intercollegiate Advisory Committee for Sedation in Dentistry (2015). *Standards for Conscious Sedation and the Provision of Dental Care*. London: RCS Publications.

