

Obesity and the dental team

What are the implications of obesity for oral health, and what considerations should be made by the dental team for treating patients with obesity? By **Mhairi Young**, GDP, NHS Tayside Public Dental Service.

Overweight and obesity are defined as an abnormal or excessive fat accumulation that may impair health.¹ Body mass index (BMI) is a common way of measuring body fat based on height and weight and is widely used in healthcare settings with a BMI of greater than 30 classified as obesity. In England, 64% of adults are overweight and 28% of adults are obese.² Twenty-three percent of children are overweight and 10% of children are obese.² Bariatric dentistry is the term used for the care of patients with obesity.³

In short, the cause of obesity is consumption of more calories than the body needs. However, a number of risk factors can increase an individual's predisposition towards obesity. These can include lower socioeconomic status, psychological and mental health conditions

and certain medications such as steroids and antidepressants which can lead to appetite changes. In addition, patients with physical impairments may have a decreased ability to exercise and other rarer predispositions to obesity include hypothalamic disease, endocrinopathies (eg Cushing's disease) or genetic conditions (eg Prader-Willi syndrome).³

People with obesity are at a threefold increased risk of premature death as a result of co-morbidities.³ These co-morbidities include cardiac disease, stroke and cancer as well as type 2 diabetes, liver disease, osteoarthritis, sleep apnoea, gastric reflux, respiratory impairments and psychological conditions such as depression and low self-esteem.²

The implications of obesity for oral health

When providing care, dental teams

must remain mindful of the effects of a high carbohydrate diet on caries rate, an association which is supported by research in the dental literature.⁴ Prevention including oral hygiene instruction, dietary advice and the use of fluoride is therefore of great importance in this population group.

Co-morbidities such as type 2 diabetes will have an impact on periodontal management and reflux may lead to increased rates of erosion. Delayed healing may occur with a decreased immune function and bleeding abnormalities may also present in patients with non-alcoholic fatty liver disease.

Considerations for the provision of dental care

Many patients with obesity can be treated safely in general dental practice with minor adjustments.³ The location of anatomical landmarks for local anaesthetic injections or intra-oral radiographs may not be immediately obvious however this can be improved through effective soft tissue retraction using instruments such as a tongue retractor.⁵ Alterations to the patient/operator positioning may also be required when treating a patient with obesity who carries excess weight around their chest and may experience breathing impairments when placed into a supine position for dental treatment.

Patients with higher levels of obesity may experience specific challenges when accessing dental services. Standard dental chairs have a weight restriction and individuals who exceed this limit may require referral to a Community or Hospital Dental Service with specialised equipment such as a bariatric dental chair as well as suitable waiting room chairs, toilets and wide doors. Step-free or wheelchair access may also be required if a patient is experiencing physical limitations and in extreme cases a domiciliary visit may be necessary.

Due to co-morbidities, patients with obesity may be at an increased risk of experiencing a medical emergency. There are also implications for the provision of dental care under sedation and general anaesthetic to ensure safe management of the airway. In reality, many factors contribute to decisions regarding the most appropriate setting in

which a patient can be safely cared for.

Prevention

Obesity is associated with high rates of patient morbidity and mortality and extensive economic impacts on healthcare services. So how can dental teams use their skills and expertise to help? We already provide dietary advice and engage our patients in discussions about sugar sweetened and acidic foods and beverages as well as proposing healthy alternatives. This dental prevention advice overlaps with prevention advice for excess weight. As such, dental teams are in a unique position to guide, supplement and reinforce health promotion advice from medical settings.⁶

type 2 diabetes, cardiac disease and some cancers.³ Certain medical procedures such as fertility treatment and surgery under general anaesthetic may not be offered to individuals with obesity and support with weight loss may therefore help the patient to access this care.

Exploring weight in a dental setting can also allow identification of those individuals who may benefit from referral to a weight management service, accelerating diagnosis and access to specialist advice and/or treatment such as bariatric surgery if indicated.

The next steps

Dental professionals may be unsure about broaching the topic of obesity with their

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Encouraging a patient to disclose their weight or BMI as part of a medical history can open up a conversation regarding weight management. This can benefit the dental patient by increasing their awareness of the links between oral and systemic disease and the implications of obesity for their oral health and provision of dental care.

In a similar way to the provision of smoking cessation advice, dental surgeries can screen for obesity and provide preventive advice. Positive healthy lifestyle changes such as minimising the intake of saturated and partially hydrogenated vegetable fats can help an individual to lower their blood pressure, cholesterol levels and/or prevent

patients and may be worried about causing offence. However, a cross-sectional multi-centre study carried out in the United Kingdom revealed that the majority of patients (63–75%) were positive about receiving healthy weight information during a visit to the dentist.⁷ Brief behavioural interventions have already proven to be effective with dental teams delivering smoking cessation advice.⁸

Training for the dental team in all aspects of obesity management is important as it is likely to become a condition of increasing prevalence in the future. Tailored training in manual handling, medical emergencies, considerations for dental care, implications

on oral health, nutritional advice and communication may give confidence to dental professionals.

Library, 12 January 2021. Available at: <https://researchbriefings.files.parliament.uk/documents/SN03336/SN03336.pdf>

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ObesityUK have released an online resource to support healthcare professionals and prevent weight-bias and stigma.^{8,9} Communication tips are provided such as the use of appropriate language, asking a patient’s permission to discuss weight, using open-ended questions and reinforcing positive behaviours in an effort to increase patient engagement and receptiveness to advice.

Conclusion

A high carbohydrate diet and co-morbidities impact upon oral health and in order to provide safe and effective care for this patient group, many factors need to be considered including the appropriate setting for treatment. The definition, causes and risk factors for obesity have been reviewed in this article as well as the implications that abnormal fat accumulation can have upon the provision of dental care.

Supporting weight loss advice is a patient-centred approach to healthcare which tackles common risk factors for both dental and systemic disease. Simple and timely nutritional advice provided by a dental team during a routine dental appointment can help a patient to manage their weight, improving quality of life and longevity.

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