Increased risk of dental caries after bariatric surgery

Those who have had surgical obesity treatment have a higher risk of dental caries than before surgery. They also often experience a general decline in oral health. This has been shown by a thesis at the University of Gothenburg.[1]

The aim of the thesis was to study the oral health of individuals before and after treatment for severe obesity. The participants had a BMI of 40 or more, or 35 or more in combination with other medical conditions, such as diabetes. Treatment involved either surgery or medical treatment.

Medical treatment includes lifestyle advice, dietary treatment, possible drug treatment, and support with increased physical activity. However, surgery has proven more effective for weight loss, and with a growing obesity epidemic in many parts of the world, more and more people are having surgery.

Dr Negin Taghat (pictured), who has defended her doctoral thesis at the Institute of Odontology at the University of Gothenburg's Sahlgrenska Academy, and who works as a dentist for the Swedish Public Dental Service in Region Västra Götaland, said: 'Around 5,000 cases of obesity surgery are performed each year in Sweden alone, and the trend is increasing. We were therefore interested in seeing whether there is any change in the oral health of these patients after surgery.'

The group of 118 obese individuals followed in the thesis revealed a pattern whereby higher BMI is associated with higher caries risk according to a rising scale. At the highest BMI values, there was a doubled risk of caries and less regular dental care.

Two years after either surgical or medical treatment, a clear division emerged between the groups. Those who had undergone surgery had gone from an average of 15.0 caries lesions on the surface of the tooth enamel to 19.1. Within the group receiving medical treatment, however, enamel lesions had decreased.

Another example relates to deeper caries lesions in the dentine, with an average

pre-treatment initial value of 4.3 lesions. Two years after treatment, individuals in the surgery group had an average of 6.4 such lesions while those in the medical treatment group had 4.9.

The associations were statistically significant, even when taking factors such as socioeconomic status and other medical conditions into account.

Dr Teghat said: 'Individuals who have undergone surgical obesity treatment may also experience a variety of oral symptoms and an impact on their oral quality of life. We saw that almost half of individuals experienced poorer oral health.'

Symptoms can include hypersensitive teeth and difficulties with chewing. The situation as a whole can also cause social discomfort.

'Health professionals and dental professionals meet these patient groups in their everyday work. It is extremely important for staff to be aware that oral health can be affected by both obesity and obesity treatment so that preventive measures can be planned.'

The group investigated within the thesis is part of the larger BAriatic surgery SUbstitution and Nutrition (BASUN) study, initiated by researchers at Sahlgrenska Academy to compare long-term outcomes of medical and surgical obesity treatment.

References

1. Taghat N. On oral health before and after obesity treatment: Studies on clinical and patient-reported outcomes. University of Gothenburg. 12 September 2023. Available at: https://gupea.ub.gu.se/handle/2077/76802 (accessed December 2023).

BDA AGMs

The West of Scotland Branch

The West of Scotland Branch AGM will be held on Wednesday 21 February 2024 at the Royal College of Physicians and Surgeons of Glasgow, 232–242 St Vincent Street, Glasgow G2 5RJ between 18:00 and 21:00. The programme will run as follows:

18:30 Registration and refreshments
18:45 AGM (for BDA members only)
19:00 Lecture – Equality, diversity and inclusion in the BDA and its relevance to dentistry with Laura Cross
20:30 Lecture ends
21:00 Close

Non-members are very welcome to attend the talk with Laura Cross at 19:00.

For further information and to book please visit: https://www.bda.org/learning-and-development/courses-and-events.

Correction to: Kenneth Richard Ray

The original article can be found online at https://doi.org/10.1038/s41415-023-6551-9
Author's correction note:
Obituary *Br Dent J* 2023; **235:** 777

When initially published, there was an omission in the first paragraph: 'After initial training posts in Birmingham, he moved to the **Royal Hospital** as registrar in oral surgery in 1957' should have read 'After initial training posts in Birmingham, he moved to the **Royal Dental Hospital** as registrar in oral surgery in 1957'.

The author apologises for any inconvenience caused.