

Interdisciplinary experiences between speech therapy and dentistry in the pre and postoperative period for bariatric surgery

Abstract

The aim of this study was to report the experiences of interdisciplinary care between speech therapy and dentistry, for adult patient's pre and postoperatively of gastropasty, in Reference Service for Bariatric Surgery at the Clinics Hospital at the Federal University of Pernambuco, in the city of Recife, northeastern Brazil. This service has a multiprofessional team of health and social assistance professionals, who monitor individuals with obesity and associated comorbidities, mainly Diabetes and Systemic Arterial Hypertension (SAH), with a view to a comprehensive and humanized treatment, aiming at a better quality of life for this target population. After the beginning of the monitoring by Speech Therapy, there was the request for the opinion and intervention of Dentistry, particularly in the context of the performance of the masticatory function. As of the year 2022, 27 adult patients, aged between 18 and 59 years old received the evaluation, orientations and interventions together, particularly regarding orofacial motricity and oral rehabilitation. In this context, the biggest challenges are related to periodontal disease, with tooth mobility and the loss of many teeth due to caries lesions and to tooth fractures due to clenching and generalized sensitivity

Keywords: mastication, bariatric surgery, speech, language and hearing sciences, dentistry

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Introduction

The increase in the incidence of obesity and the negative impacts of this condition on the quality of life of affected individuals has led to a vast investigation on the subject; from prevention to intervention and control measures, with emphasis on multidisciplinary assistance, due to the complexity of variables involved. Prevalence of type 2 diabetes mellitus has increased rapidly and is expected to increase even further. In Latin America countries there is an upward trend among the younger age groups, with a major negative impact on the quality of life and burden of the disease for the health care system. Increasing rates of overweight and obesity associated with lifestyle changes and aging of the population are the main contributing factors to the increasing prevalence of type 2 diabetes. Dietary shifts in the Brazilian population (low frequency of fiber-rich foods and heavy consumption of saturated fatty acids and sugars) and sedentary lifestyle are the main risk factors for obesity, type 2 diabetes, and other chronic diseases.¹ Bariatric surgery is the only available technique with established long-term effects on weight loss and decreased morbidity and mortality in subjects who are severely obese and cannot lose weight by traditional means or who suffer from serious obesity-related health problems.^{2,3}

Obesity and metabolic syndrome can be labeled as worldwide outbreak; thus, both have led to serious public health problem. The oral conditions of morbidly obese individuals, in the and post-surgical conditions are not clearly shown in the scientific literature, since these individuals may have changes related to metabolism, psychosocial and environmental factors. Few studies have linked tooth wear and tooth loss comparing individuals in the obese phase and after obesity surgery.⁴ Oral health can be worsened by both, obesity and metabolic syndrome. Tooth loss harms masticatory function, essential status to

whom will be submitted to bariatric surgery. Individuals submitted to Roux-en-Y gastric bypass, regardless of the surgery period, presented more dental wear on the incisal/occlusal surfaces, and the anterior teeth were the most affected.^{4,5}

Evaluating the stomatognathic system indicated that women with clinically severe obesity have less masticatory efficiency than non-obese. There is a positive influence of bariatric surgery in masticatory activity after 3 and 6 months. Thus, monitoring the parameters of the stomatognathic system could be important in the indication and outcomes of bariatric surgery.⁶ After bariatric surgery, all the obese patients, regardless of dental status modified their chewing kinematics. The effects of this chewing behaviour on bolus granulometry depended on dental status and type of food. Further studies are needed to understand better the impact of dental status on feeding behaviour and nutrition in patients with obesity.⁷ The interdisciplinary action between Speech Therapy and Dentistry, with the adjustment of the form in favor of the functions of the stomatognathic system, here in particular for the performance of the chewing function, represent the main purpose of the experiences reported below.

Experience report

The Bariatric Surgery Service at the Hospital das Clínicas at the Federal University of Pernambuco, in Recife, appears as a reference for the treatment of morbid obesity in all northeastern Brazil. With approaches divided into two "Kits", there are opinions and necessary interventions, which include professionals from Nutrition, Psychology, Nursing, Social Work, Speech Therapy, Physical Education, Endocrinology, and laboratory tests (Kit 1). In Kit 2 opinions from Cardiology, Pulmonology, and exams, such as ultrasonography, endoscopy, lab tests, and chest X-rays are considered.

Since 2022, the Dentistry started to act, at the request of the Speech Therapy, in the preoperative opinion (with orientations and necessary interventions) and in the postoperative control. The evaluations occur in the hospital environment, for inpatients and between the Clinical Hospital and the Department of Clinical and Preventive Dentistry, especially for patients who are reasonably mobile. Before referral to dentistry, patient evaluation and interventions (preoperative for bariatric surgery) take place in Speech Therapy. The latter refers the patient for dental evaluation, according to what is observed in the performance of the mastication function, mainly discomfort and major limitations for the formation of the bolus. The individuals are between the ages of 18 and 59. Most of the 27 patients evaluated and assisted were female. Of these, 25 had loss of more than one dental unit. The most frequent complaints of these individuals are related to absence of teeth, dentures or ill-fitting or inadequately made dentures, whether removable partial dentures or complete dentures. The following have also been frequently reported: chewing, toothache or generalized sensitivity in the mouth, and esthetic issues when orthodontic treatment is needed,

Tooth wear, especially on the incisal surfaces of the upper or lower permanent incisor teeth, was a common finding in the clinical assessment of these individuals, but was not mentioned as a complaint; as was the presence of dental calculus, particularly on the buccal and lingual surfaces of the lower permanent incisor teeth. The latter was related to the need to “clean” the teeth. Tooth mobility was also noted, but in five of the patients assessed, in the region of the permanent incisors (pre-surgical phase). Discomfort or symptoms that could be associated with temporomandibular joint disorders were reported more specifically by four individuals, despite the frequency of clicks perceived during the physical examination. Orofacial pain was highlighted by two patients. When the surgical procedure is scheduled soon, dental care is directed to situations of pain and potential risk of infection, with the report attached to the multi-professional opinion; referring the patient for the continuity of the necessary treatments in the post-surgery period. Some post-surgical patients (five evaluated) present as specific complaints the sensation of dry mouth, tooth mobility, and bad breath, associated with periodontal diseases and clenching between the teeth.

The evolution of masticatory performance is monitored simultaneously by speech therapy and audiology professionals, who share the necessary guidance, as well as evaluating and discussing the conditions presented, with the search for solutions to the difficulties presented; particularly aimed at the performance of oral functions.

The biggest challenge to date is related to dental care, mainly aimed at the prosthetic rehabilitation of these patients (dental

prostheses), both because of the losses and because of the more vulnerable socio-economic condition of the target audience. The Obstructive Sleep Apnea reported by some of these individuals and the changes in chewing, tooth sensitivity, clenching and tooth wear, periodontal disease and the need to remove residual roots are still major challenges. The “logistics” of the appointments have been prioritized in order to minimize travel for this group of patients.

Final considerations

Even with the synchrony in thought and actions between professionals in Speech Therapy and Dentistry, with adjustments to facilitate the logistics of care, oral rehabilitation, which enables more efficient chewing, represents a purpose to be achieved.

Acknowledgments

None.

Conflicts of interest

The authors declare there is no conflict of interest in this job.

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