

POST-BARIATRIC TRANSFORMATIONS: THE RELATIONSHIP BETWEEN BARIATRIC SURGERY AND ALCOHOLISM

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Abstract: Introduction: Obesity has become a growing public health problem, and bariatric surgery is considered the most effective treatment for weight loss and remission of comorbidities in cases of severe obesity. However, there is growing concern about the increased risk of developing alcohol use disorders among patients undergoing these procedures. The relationship between bariatric surgery and alcoholism is complex, involving metabolic and psychological changes that can increase susceptibility to alcoholism. This article reviews the incidence, risk factors and clinical implications of alcohol use after bariatric surgery, highlighting the importance of post-operative monitoring to improve long-term results and quality of life for patients. **Method:** This study uses a bibliographic review with 23 sources of information, consulted in databases such as Pubmed, Scielo, VHL and NCBI, using keywords such as “obesity”, “bariatric surgery”, “behavioral disorders”, “anxiety” and “alcoholism.” After selecting the material, there was a detailed analysis of the texts, review by all authors and consensus on the selection. The selected works, published between 2012 and 2024. **Discussion:** The relationship between bariatric surgery and the increased risk of post-surgical alcoholism is complex and multifactorial. Psychiatric factors, such as depression and anxiety, along with neurobiological and metabolic changes, may contribute to this phenomenon. Different types of bariatric surgery, such as Roux-en-Y gastric bypass, are associated with anatomical and metabolic changes that may increase susceptibility to alcohol. Early psychological and metabolic monitoring can play a crucial role in preventing and managing post-surgical alcoholism. These findings highlight the importance of a multidisciplinary and preventive approach in the care of patients undergoing bariatric surgery.

Keywords: obesity, bariatric surgery,

behavioral disorders, anxiety and alcoholism

INTRODUCTION

Obesity has been a growing public health problem in recent decades, with a dramatic increase in its incidence. Bariatric surgery is the only approach that has been shown to be effective in the treatment of severe obesity resistant to clinical treatment and is associated with a significant resolution of associated comorbidities such as diabetes, hypertension and dyslipidemia, the two procedures included in bariatric surgery are Y-shaped gastroplasty. Roux and vertical gastroplasty (KANJI S, et al., 2019).

Surgical treatment works as a mechanism of action for weight loss with bariatric surgery. For operated patients, lifestyle changes are recommended to improve surgical results and maintain weight loss after surgery. One of the most important healthy lifestyle behaviors is abstinence from alcohol (MILLER-MATERO LR, et al., 2020).

A recent longitudinal study reported an increased incidence of alcoholism in patients undergoing bariatric surgery. The interaction between bariatric surgery and alcoholism is very complicated and multifaceted, this is mainly caused by certain changes in our metabolism after these surgeries, which can increase the likelihood of the effects of alcohol as its absorption is much faster, and the body becomes more sensitive to the consequences of alcohol itself. Furthermore, there are cases in which food dependence can be replaced by alcohol dependence after surgery (IVEZAJ et al., 2019). However, it is important to highlight that not all bariatric patients develop problems with alcohol.

There are three main types of mechanisms in bariatric surgery: restrictive (such as vertical banded gastroplasty and laparoscopic adjustable gastric banding), malabsorptive (such as jejunoileal diversion

and biliopancreatic diversion), and combined (such as Y-shaped gastric bypass). Roux (RUBAN et al., 2019).

It is important to emphasize how the risk of problems related to alcohol consumption is increased among patients undergoing bariatric surgery, reaching 6.5% of those operated on (Saules KK). Among the potential problems is the transfer of compulsive eating to alcohol abuse, with prevalence rates increasing from 7.6% to 9.6% in the 12-month postoperative period (King WC). There is also the possibility of intentionality in adopting this problematic behavior (Kudsi OY, Ashton K).

Therefore, the objective of the present work is to analyze the factors involved in this correlation, describe the occurrence, risks and implications for the clinical treatment of alcoholism in patients after bariatric surgery. As well, it is intended to provide guidance for health professionals on the importance of monitoring, valuing quality of life.

METHODOLOGY

This study was based on a bibliographic review where 23 sources of information were analyzed, using a specific method. To find these sources, different data sources were consulted, such as Pubmed, Online Scientific Electronic Library (SciELO), Virtual Health Library (VHL) and National Center for Biotechnology Information (NCBI), using relevant keywords such as obesity, bariatric surgery, behavioral disorder, anxiety, alcoholism according to the DECS / MESH descriptors. After screening the material, the texts were thoroughly analyzed and the results interpreted. All articles were reviewed by all authors, with one author playing the role of arbiter in case of disagreement, in order to reach a selection consensus. Of the sources found, 15 were identified as most relevant and valuable for the research, and are covered in the period 2012-2024.

DISCUSSION

Therefore, the relationship between bariatric surgery and the increased prevalence of post-surgical alcoholism is complementary and multifactorial. Several aspects of the condition are related to the association, including psychiatric, metabolic and even neurobiological factors. For example, anatomical operations such as Roux-en-Y Gastroplasty - especially after RYGB - are known to disrupt the anatomy of the hypothalamus and interfere with the secretion of the hormone ghrelin, affecting the reward system in the brain and, therefore, the eating habit. large amounts of alcohol (Miller-Matero et al., 2020; Mendoza YP et al., 2021). However, patients undergoing variations of bariatric surgery have demonstrated increased post-operative intake levels (Kanji S et al., 2019; Ibrahim N et al., 2018).

Likewise, psychiatric conditions such as uncontrolled pre-surgical depression and anxiety significantly correlate with increased labor intake (Miller-Matero LR et al., 2020; Ibrahim N et al., 2018). Studies reveal a strong correlation between depression and increased post-surgery alcohol consumption (Mendoza YP et al., 2021). Psychological support can be essential to mitigate these risks and promote lower alcohol consumption (Orellana ER, Covasa M and Hajnal A, 2019).

Psychological follow-up is crucial for preventing the aforementioned developments and promoting a reduction in alcohol intake. In neurobiological circumstances, the reward system in the brain, including the mesolimbic dopaminergic system as well as the nucleus accumbens, are affected by substances as well as pleasurable food. Repeated stimulation of these systems can desensitize the receptors, leading to the need for large doses to achieve the pleasurable effect (Conason A., ET AL 2013). This may explain the transfer of binge eating to alcohol abuse after bariatric surgery.

Furthermore, bariatric surgeries alter the pharmacokinetics of alcohol, with maximum blood alcohol concentration values and greater sensitivity to alcohol after surgery (Acevedo MB et al., 2020). Although there is a decrease in alcohol consumption during the first year after surgery, this pattern changes after one year; alcohol dependence increases significantly between one and seven years after surgery (Marek RJ et al., 2020; Mendoza YP et al., 2021; White GE, Courcoulas AP and King WC, 2019; King WC et al., 2017).

Replacing addictions with alcohol can be even more worrying, as alcohol is harmful to blood glucose control and the general health of patients (Santos MM dos, ET AL 2018). Studies point to a rate of alcohol use as a mechanism to deal with emotional suffering, promoting functional and social deterioration (Wee CC, ET AL 2014).

Additionally, the main risk factors for problematic post-surgical alcohol use include history of pre-operative alcohol use disorder, male sex, youth, history of pre-operative alcohol use, smoking, recreational drug use, lack of psychological support, self-esteem problems and regular alcohol consumption (Spadola CE, ET AL 2015; Li L, ET AL 2016; Ivezaj V, ET AL 2019; Briegleb M, Hanak C., 2020). The above research findings imply better screening and psychological monitoring of patients to reduce the aforementioned risk.

Roux-en-Y gastric bypass is a common modality of bariatric surgery, limiting both food intake and absorption due to the combination of stomach volume restriction and small intestine diversion (Ruban et al., 2019). Studies indicate that RYGB is strongly associated with increased risk of alcohol consumption after bariatric surgery (Li and Wu, 2016).

They argue that RYGB can affect alcohol metabolism, which is equivalent to greater bioavailability and higher concentrations in

the bloodstream even after alcohol ingestion at relatively low concentrations due to the reduction of the first phase of its gastric metabolism (Ivezaj et al., 2019). Such reasoning is substantiated by a hypothesis that changes in gastric peptides, including ghrelin, may contribute to increased alcohol consumption after bariatric surgery by stimulating drinking and reinforcing addictive behavior through structural and opioid processes (Blackburn; Hajnal)

Furthermore, patients undergoing RYGB often present increased sensitivity to the effects of alcohol, especially intoxication with smaller amounts and hypoglycemic episodes resulting from reduced glucose availability. Hypoglycemia results in blood sugar gain due to the action of insulin to maintain blood glucose (Blackburn et al., 2016). Such metabolic and neurobiological changes may potentially facilitate the transfer of binge eating to binge drinking and therefore enhance alcohol dependence (Blackburn et al., 2016).

Studies have shown effects of BMI dependence after surgery, with higher BMI participants likely becoming dependent. Additionally, patient weight loss has been identified as a risk factor after surgery (Blackburn et al., 2016).

All of these findings highlight the need for

a comprehensive understanding of the factors involved and the preventative and supportive interventions to help reduce risk for better outcomes.

CONCLUSION

The relationship between bariatric surgery and the increased risk of post-surgical alcoholism is an obstacle that needs a holistic and preventative approach. Patients must be screened for the presence of risk factors and receive adequate psychological and metabolic monitoring; however, it is important to remember that the post-surgery journey is unique for each patient. However, awareness of the complexity of the relationship between bariatric surgery and post-surgical alcoholism highlights the importance of a specialized healthcare team, including doctors, psychologists, nutritionists and other specialists, who work together to ensure full patient support. Additionally, interventions must include detailed preoperative screening and education about the risks of postsurgical alcoholism. Such measures are necessary as post-surgical alcoholism has a significant impact on the patient's physical and mental health, providing them with a competitive advantage in long-term recovery and a full life after bariatric surgery.

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