

IMPACT OF BARIATRIC SURGERY ON METABOLIC CONTROL IN ADOLESCENTS WITH SEVERE OBESITY: A LITERATURE REVIEW

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RESUMO

INTRODUCTION: The prevalence of obesity among adolescents has shown a growing trend in recent decades, with estimates from the World Health Organization (WHO) indicating that approximately 41 million children worldwide are obese, especially in the pediatric and adolescent age groups. This perspective corroborates the increase in conditions that were previously almost exclusive to the adult population, such as increased cardiovascular risk, dyslipidemia, obstructive sleep apnea, hypertension, and type 2 diabetes mellitus. Therefore, the incidence of bariatric surgery among adolescents has increased with the aim of mitigating the effects of severe obesity and achieving better metabolic control. However, despite the growing trend of this surgical procedure, specific studies on the subject are still scarce in the literature, especially those with long-term follow-up in this population.

OBJECTIVE: To evaluate, through a literature review, the impact of bariatric surgery on the metabolic control of adolescents with severe obesity, with emphasis on outcomes such as glycemic control, insulin resistance, and associated metabolic parameters, based on recent clinical evidence.

MATERIALS AND METHODS: This is a literature review conducted in the PubMed database, including 6 articles published in the last 6 years, in English. Reviews and observational studies addressing adolescents with severe obesity undergoing bariatric surgery were selected. The following descriptors were used: “bariatric surgery” OR “metabolic surgery” AND “adolescent” OR “young people” AND “severe obesity” OR “morbid obesity” AND “metabolic control” OR “glycemic control” OR “insulin resistance”.

RESULTS AND DISCUSSION: Bariatric surgery in adolescents with severe obesity promotes a 25-35% loss of body weight and a reduction in BMI of approximately 10-15 kg/m². The most commonly performed procedures were Roux-en-Y gastric bypass and sleeve gastrectomy, with consistent metabolic benefits across studies. Remission of type 2 diabetes is observed in rates that can reach up to 80-90% of cases, with a significant decrease in HbA1c and improvement in insulin resistance (HOMA-IR). There is an increase in HDL and a reduction in LDL and triglycerides. These results vary according to the type of procedure and the follow-up time, showing some heterogeneity among the studies. Compared to clinical treatment, it presents greater efficacy and sustainability of results, although it requires prolonged follow-up due to nutritional risks.

CONCLUSION: This type of surgery demonstrates a significant and consistent impact on the metabolic control of adolescents with severe obesity, promoting a marked improvement in glycemic profile, insulin resistance, and lipid parameters, in addition to high rates of remission of type 2 diabetes mellitus. These findings reinforce its potential as an effective therapeutic strategy in the face of the limitations of isolated clinical treatment. However, the indication for the procedure should be carefully considered, taking into account nutritional risks and the need for long-term multidisciplinary follow-up. Furthermore, the scarcity of robust studies in the adolescent population highlights the need for further research to consolidate evidence and optimize management protocols in this age group.

Palavras-chave: Bariatric Surgery; Adolescent; Severe Obesity; Metabolic Control; Insulin Resistance.

