

Nutritional and metabolic repercussions of bariatric surgery on the maternal body and newborn



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ABSTRACT

Obesity is a public health problem in the world and one of the most serious to face according to the World Health Organization. The surgical treatment of this disease is done through bariatric surgery, which in addition to weight loss occurs the remission of diseases associated with obesity, such as diabetes and hypertension. The indication for this surgical procedure is based on four criteria: body mass index, age, associated diseases, and duration of the disease.

Keywords: Pregnancy complications, Bariatric surgery, Pregnant women's nutrition.

1 INTRODUCTION

Obesity is a public health problem in the world and one of the most serious to face according to the World Health Organization. The surgical treatment of this disease is done through bariatric surgery, which in addition to weight loss occurs the remission of diseases associated with obesity, such as diabetes and hypertension. The indication for this surgical procedure is based on four criteria: body mass index, age, associated diseases, and duration of the disease. Thus, it has now become a frequent procedure for the treatment of this chronic disease. However, in women of childbearing age who became pregnant after the procedure, some disadvantages were observed in relation to the disabsorption of some nutrients caused by the surgery, which end up having repercussions on the maternal and child bodies.

2 OBJECTIVE

To discuss the nutritional impacts on women who became pregnant after bariatric surgery and their possible consequences on the newborn.



3 METHODOLOGY

The present work consists of a literature review with exploratory and retrospective research carried out in the Scopus and PubMed databases, between June 03 and 24, 2022, using the descriptors "pregnancy complication" AND "bariatric surgery" AND "nutrition during pregnancy". Seven articles were selected for the writing of the abstract, using as exclusion criteria cases of articles without free/open access, titles discrepant with research interests, repeated articles in the databases, review articles, articles published before 2017 and also subtracted from the reading of the abstracts, thus totaling the amount of 5 articles.

4 RESULTS

It was observed that women who became pregnant after bariatric surgery had nutritional and metabolic repercussions on the body, as well as newborns. A high prevalence of micronutrient deficiencies was observed in pregnant women and neonates who were born small for gestational age (SGA). In addition, one study showed vitamin A deficiency in 90% of the pregnant women in the sample. Another study, however, revealed that pregnant women with nutritional counseling had a lower rate of SGA babies, as well as pregnant women who had low weight gain during pregnancy had a higher rate of SGA children and those who underwent fertility treatment (n=14) did not have any SGA babies. In addition, it was observed that neonates of mothers with Roux-en-Y gastric bypass had micronutrient deficiencies in the umbilical cord. In contrast, another analysis of a retrospective case-control study revealed that there is no statistical difference between women who became pregnant before and after 1 year after bariatric surgery regarding hemoglobin, ferritin, and 25-OH Vit-D.

5 CONCLUSION

Pregnancy after bariatric surgery causes nutritional impairment in both mother and newborn. There is evidence on the relationship between SGA neonates and those with micronutrient deficiencies when nutritional counseling is not carried out during pregnancy. Therefore, the importance of multidisciplinary follow-up of these pregnant women can be perceived, so that quality dietary follow-up can be carried out. However, another study concluded that there was no difference between post-bariatric pregnant women before and after one year in relation to hemoglobin, ferritin and 25-OH Vit-D.



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