

TREATMENT OF MORBID OBESITY WITH VERTICAL GASTRECTOMY

Tratamento da obesidade mórbida com gastrectomia vertical

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ABSTRACT – Background - Vertical gastrectomy is an option to morbid obesity treatment. Removing a relevant part of the stomach's great curvature, a gastric tube is created with low volumetric capacity, giving to the operation the restrictive characteristic. **Aim** - To evaluate the patients submitted to vertical gastrectomy regarding gender, age, body mass index, associated comorbidities, time of hospitalization and evolution on the early postoperative period. **Methods:** This was a descriptive and retrospective study that analyzed the medical records of 114 morbidly obese patients submitted to vertical gastrectomy. **Results:** A hundred and seven (93,8%) of the patients were male and the average age was 38 years old. The body mass index was 45,9 kg/m². About the time of hospitalization, there was a minimum of 3 and maximum of 48 days. The main comorbidity was systemic arterial hypertension (63%). About the evolution after the surgery, 24 patients (21%) needed intensive care and four patients died (3,5%). **Conclusions** - Vertical gastrectomy constitutes a safe and effective method to the weight loss on morbid obesities, being a surgical technique with low morbimortality and good immediate surgical results.

HEADINGS – Obesity. Body mass index. Gastroplasty.

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DESCRITORES - Obesidade. Índice de massa corporal. Gastroplastia.

RESUMO – Racional - A gastrectomia vertical constitui-se em uma das opções de tratamento para a obesidade mórbida. Com a remoção de parte relevante da grande curvatura gástrica, cria-se um estômago tubular com pequena capacidade volumétrica, dando a característica restritiva à operação. **Objetivos** - Avaliar os pacientes submetidos à gastrectomia vertical quanto ao gênero, idade, índice de massa corporal, co-morbidades associadas, tempo de internamento e evolução pós-operatória a curto prazo. **Métodos** - Realizou-se um estudo descritivo e retrospectivo em que foram analisados os prontuários de 114 pacientes obesos mórbidos submetidos à gastrectomia vertical. **Resultados** - Dos 114 pacientes, 107 (93,8%) eram do gênero masculino, sendo que a idade média foi de 38 anos (19 a 55). O índice de massa corporal médio foi de 45,9 kg/m² (35 a 65). O tempo de internamento teve um mínimo de 3 e máximo de 48 dias. A principal co-morbidade associada foi a hipertensão arterial sistêmica (63%). Como evolução pós-operatória, 24 pacientes (21%) necessitaram de cuidados em unidade de terapia intensiva e houve um total de quatro óbitos (3,5%). **Conclusões** - A gastrectomia vertical constitui-se em método seguro e eficaz para perda de peso em obesos mórbidos, sendo uma técnica cirúrgica com baixa morbimortalidade e bons resultados cirúrgicos imediatos.

INTRODUCTION

In the western world, the prevalence of obesity - defined as patients with body mass index [BMI = weight (kg)/height (m)²] greater than 30 kg/m² - is increasing in all age groups. In the United States of America, based on data from the tables of metropolitan life insurance, it is estimated that in the 80's, 20% of men and 27% of women were overweight and the National Study of Health and Nutrition Examination suggests that this would be around 31% for men and 35% for women. In the 90's 58 million Americans were obese and 40% of this population will be obese by 2025. Currently, approximately two thirds are overweight or obese¹².

In this same country, with weight loss programs, drugs for treatment of obesity and physical conditioning programs is spent about 33 billion US dollars, without taking into account the estimated one billion dollars needed

for the process ranging from research to the launch of each new drug to treat obesity. To treat co-morbidities directly related to obesity, are spending three times more (99 billion dollars a year)¹⁶ Based on these numbers, it appears that obesity is a public health problem with implications for socioeconomic representative and that have reached epidemic proportions.

Considering the BMI to define obesity, the American Society for Bariatric Surgery considers index up to 25 as normal (normal weight), between 25 and 30 as overweight, between 30 and 35 as class I obesity, between 35 and 40 as obesity class II and above 40 as "morbid obesity or clinically morbid obesity"⁹ Broader definition of morbid obesity must include patients who have severe co-morbidity directly related to obesity³.

Comorbidities associated with obesity are numerous and may be named in a list, which include: type II diabetes, hypertension, hypertrophic cardiomyopathy, hyperlipidemia, cholelithiasis, sleep apnea, hypoventilation, degenerative arthritis, psychosocial problems, several types of cancers, chronic dorsalgia^{1,10}.

Criteria for surgical treatment for obesity were defined by the Panel's Consensus Development Conference of the National Institute of Health of the United States in 1991, and include patients with body mass index greater than 40, patients with this index greater than 35 who have severe cardiopulmonary comorbidity or severe diabetes, and also patients who were evaluated by a physician experienced in treatment of obesity, have little chance of success with non-surgical measures, demonstrated, for example, can not reduction weight-control programs recognized by weight or reluctance to participate in these programs (in these patients, in particular, the indication is not formal, but must be considered).

Surgical treatment for morbid obesity is an effective way to maintain weight control for long term^{7,14,15}. Loss can be sustained for 16 years about 67% of overweight⁵. There are three forms of surgical treatment of obesity: restrictive procedures, disabortive and combined (restriction and malabsorption), each with their results and complication rates⁵.

It is known that the best results are obtained with the combined procedures when compared to purely restrictive, although with higher rates of complications and mortality^{4,6}. It is important to track patients in the immediate postoperative period and later to better assess the results and possible complications. Bariatric surgery involves joint intervention on the stomach that can lead to complications or sequelae anatomic and/or functionally related. These operations significantly alter the secretory function and emptying of the stomach and may result in postoperative syndromes: dumping syndrome, alkaline reflux gastritis, malabsorption, Roux-Y stasis, afferent and efferent loop, peptic ulcer, cholelithiasis and nutritional changes (weight loss, anemia, osteomalacia and osteoporosis, malnutrition

and vitamin)⁸.

The gastric sleeve or sleeve gastrectomy is a purely restrictive procedure that involves the removal of the greater curvature of the stomach, starting 4-6 cm from the pylorus to the oesophago-gastric angle, leaving the new reservoir with an elongated tubular shape and volume of between 150 and 200 ml. It is recommended for all types of obese patients and is very effective for super obese patients, ie, those with body mass index greater than 50 kg / m² and for those who eat large amounts of food at each meal. It is a simple procedure, without anastomoses and with lower risk of complications when compared to other bariatric procedures longer and more complex¹³.

Since the goal of bariatric surgery is to achieve the best results with minimum adverse effects, was conducted this retrospective study, a survey of characteristics and early postoperative outcomes of patients undergoing gastric sleeve.

METHODS

This study was conducted at Charity Hospital Santa Casa de Misericórdia de Curitiba, PR, Brazil from March 2008 to March 2010.

After review and approval of the Ethics and Research Committee, were reviewed retrospectively the medical records of 114 patients undergoing gastroplasty. It was analyzed the following data: gender, age, weight, height, body mass index, co-morbidities, length of hospitalization and immediate postoperative course.

As inclusion criteria, it was selected patients with body mass index greater than 40 kg/m² or index between 35 and 39 kg/m² with co-morbidities sent from primary care units, for sleeve gastrectomy via the System Unified Health exclusion criteria were: absence of medical records, medical records filled out incompletely or divergent and inconsistent data between the writing in the ambulatory and hospital care. If the patient did not fit into any of these items, it was included in the research protocol.

RESULTS

Of the total 114 patients analyzed, 107 (93.8%) were male, and the average age was 38 years (19 to 55). The mean body mass index was 45.9 kg/m² (35-65). The most common comorbidity was associated with hypertension (63%), followed by diabetes mellitus type 2 (23%) and dyslipidemia (15%). The length of hospitalization of patients was three days, and remained in hospital in maximum of 48 days few patients who required hospital care due intensive care for longer periods and/or complications after surgery. In postoperative course, 21% required treatment in intensive care unit for at least 1 and maximum of 15

days. In relation to deaths, there were a total of four (3.5%): two from acute respiratory failure - in the 13th and 24th postoperative days -, one died due nosocomial pneumonia on the 16th postoperative day and a last death triggered by Fournier's syndrome on the 36th postoperative day. All patients who died had a body mass index greater than 60 kg/m² and had at least one associated comorbidity.

DISCUSSION

Obesity can be considered one of the most important chronic disease that affects individuals of all ages. The results of surgical treatments to show greater weight loss in patients with moderate or severe obesity compared to clinical outcomes. Even those with body mass index too high to benefit from other surgical procedures for weight loss, the increased risk of postoperative complications does not make them favorable candidates for such operations. Thus, some procedures have been proposed for effective weight loss associated with reduced risk of complications.

The sleeve gastrectomy is a safe and effective these methods, with low morbidity, good postoperative results and low complication rate. Moreover, it can be used as initial therapy alone or secondary - for example, after failed gastric banding.

Even accounting for a small percentage of total operations for weight loss, there is the tendency of the gastric sleeve having their increasingly frequent use, since it has proven to be effective in considerable loss of weight associated with a low mortality². Thus, this technique is being proposed and accepted by many as isolated bariatric surgery procedure¹¹.

Although being good proposal, more detailed researches are needed, especially the ones with longer follow-up, trying to achieve the ideal surgical method for each patient.

CONCLUSIONS

The vertical gastrectomy is a safe and effective method in weight loss in morbid obese patients in early follow-up, but long-term studies are required to compare this procedure with other techniques.

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