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Original Article

COMPLICATIONS AND DEATHS IN OPERATIONS TO TREAT MORBID OBESITY

Complicações e óbitos nas operações para tratar a obesidade mórbida

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ABSTRACT - ***Background*** - Bariatric surgery, although complex, has low morbidity and mortality, but when they happen, serious consequences are expected in patients evolution. ***Aim*** -To evaluate the presence of complications and deaths in patients with morbid obesity who underwent surgical treatment. ***Methods*** - Retrospective analysis of 656 patients undergoing bariatric surgery. Were analyzed: sex, age, pre-operative weight, body mass index before surgery, procedure performed, length of hospital stay, post-operative complications and mortality. ***Results*** - The age ranged from 16 to 68 years (mean 36.6 years). Of the total, 80.7% were female. The mean body mass index was 42.8kg/m^2 (35 to 68 kg/m^2). The average length of hospital stay was 4.5 days (1 to 125 days). The gastric bypass was performed in 370 patients (56.40%) and operation of Capella in 236 cases (35.97%). Major complication were fistulas in 17 patients (2.59%). Reoperation was needed in 17 patients (2.59%). Eight patients died (1.21%), three submitted to Capella procedure, three to bypass, Scopinaro operation in one and vertical gastrectomy in one. ***Conclusion*** - The main complication was digestive fistula, which occurred in 2.59% and mortality was 1.21%.

HEADINGS - Obesity, morbid. Surgical procedures, operative. Complications.

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RESUMO – ***Racional*** - A cirurgia bariátrica, apesar de complexa, apresenta baixa morbimortalidade; contudo, quando presente apresenta graves conseqüências. ***Objetivo*** - Avaliar a presença de complicações e óbitos nos pacientes portadores de obesidade mórbida submetidos a tratamento cirúrgico. ***Métodos*** - Análise retrospectiva de 656 pacientes submetidos a procedimento cirúrgico bariátrico. Foram analisados: sexo, idade, peso pré-operatório, índice de massa corporal pré-operatório, procedimento realizado, tempo de internação, complicações pós-operatórias e mortalidade. ***Resultados*** - A idade variou entre 16 a 68 anos (média de 36,6 anos). Do total, 80,7% eram do sexo feminino. O índice de massa corporal médio foi de 42,8 kg/m^2 (35 e 68 kg/m^2) O tempo médio de internação foi de 4,5 dias (1 a 125 dias). O bypass gástrico foi realizado em 370 pacientes (56,40%) e a operação de Capella em 236 casos (35,97%). A principal complicação encontrada foi fístula, em 17 pacientes (2,59%). Houve necessidade de reoperação em 17 pacientes (2,59%). Oito pacientes morreram (1,21%), três foram submetidos à operação de Capella, três à bypass, um à opração de Scopinaro e um à gastrectomia vertical. ***Conclusão*** - A principal complicação foi a fístula digestiva, que ocorreu em 2,59% e a mortalidade foi de 1,21%.

DESCRITORES - Obesidade mórbida. Procedimentos cirúrgicos operatórios. Complicações.

INTRODUCTION

Obesity is a chronic, multifactorial and genetically related to excessive accumulation of body fat[2]. Morbid obesity is becoming an endemic disease, associated with several comorbidities which decreases the quality of life and life expectancy[9]. The higher the individual's body weight lower your life expectancy[14].

It is considered obese when the body mass index (BMI) is above 30 kg/m^2. As for gravity, the WHO defines obesity grade I when the BMI is between 30 and 34.9 kg/m^2, class II obesity, between 35 and 39.9 kg/m^2 and obesity grade III when it exceeds 40 kg/m^2 [2]. Are also considered

morbidly obese patients the ones at 100% or more above their ideal weight or 45.4 kg over ideal weight[5].

The prevalence of obesity is increasing in developed countries, and morbid obesity (BMI> 35 kg/m^2) has grown twice as fast as obesity (BMI between 30 and 35 kg/m^2)[13]. In Brazil, the growth was greater than 90% in the obese population in the last 30 years[3,7]. Today is a major public health problems in Brazil and worldwide[2,3].

Morbid obesity is an imminent risk to life and should be treated definitively. According to the National Institutes of Health (NIH) Consensus Conference in 1991, surgical treatment is the best option for weight loss and maintenance in the long term[1,3].

The bariatric surgical procedures are safe and effective in increasing the longevity and quality of life of morbidly obese patients[5]. Bypass Roux-en-Y is the most common operation in the United States,[1] and considered the most effective procedure for the control of morbid obesity and recommended as the gold standard of treatment[5].

Bariatric surgery, although complex, has low morbidity and mortality, and so is justified in the treatment of morbid obesity[3].

The intention of this paper is to evaluate the complications and deaths of patients with morbid obesity who underwent surgical treatment.

METHODS

A retrospective analysis of 656 patients undergoing bariatric surgery at hospitals of Joinville, SC, Brazil from November 1999 to July 2010. They were analyzed in the following aspects: gender, age, preoperative weight, preoperative BMI, submitted procedure, hospitalization time, postoperative complications and mortality. Complications were fistulas, pulmonary thromboembolism and those that resulted in death and reoperation; fistula and pulmonary thromboembolism were considered major complications,.

The criteria for surgery were based on determinations of the "National Institute of Health Consensus Development Panelon Gastrointestinal Surgery for Severe Obesity" including BMI 40 kg/m^2 or greater than 35 kg/m^2 with severe comorbidities.

RESULTS

Ages ranged from 16 to 68 years (mean 36.6 +/- 10.35 years). Females predominated representing 530 patients (80.7%). The mean body mass index (BMI) was 42.8 kg/m^2, ranging between 35 and 68 +/- 5.48 kg/m^2. The average hospital stay was 4.5 days (1-125 days).

The operation more performed was Roux-en-Y gastric bypass in 370 patients (56.40%), three through laparotomy. The operation of Capella (gastric bypass Roux-en-Y with ring) was performed in 236 cases (35.97%), 99 laparoscopically done. The gastric band was performed in 19 patients (2.89%). The laparoscopic sleeve gastrectomy was performed in 16 patients (2.43%). Scopinaro's operation was performed in 10 patients (1.52%), six laparoscopically. The laparoscopic duodenal switch was performed in five patients (0.76%).

Major complication was fistula in 17 patients (2.59%). Three (0.4%) had pulmonary thromboembolism. There was need for reoperation in 17 patients (2.59%), of which 10 due to fistula (eight anastomotic fistula and two on excluded stomach), one fistula on anastomosis in the Roux-en-Y, two for obstruction of the Y, two for bleeding, one suspicion of fistula with washing of the cavity, one by pancreatitis. Eight patients died (1.21%), two pulmonary embolism and the other from fistula (Figure 1). Of the patients who died three had undergone to operations of Capella, three bypass, one operation of Scopinaro and one sleeve gastrectomy.

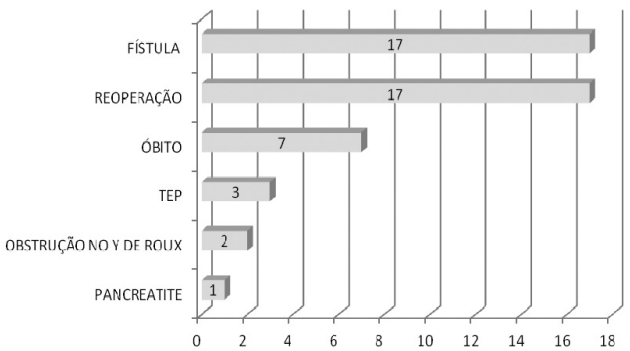

FIGURE 1 - Complications and deaths among 656 patients who underwent operations for morbid obesity

DISCUSSION

Bariatric surgery is the treatment option for effective and safe weight loss, increasing the longevity and quality of life of morbidly obese patients. But it is not a complication-free procedure. The main and largest is the fistula; the incidence varies from 0.5 to 3%[1,2,3,5,6]. They are difficult to be diagnosed. The most common signs of their existence are increased heart rate and respiratory fatigue[1,4,8,11].This complication occurred in this series in 2.59%, and 11 underwent relaparotomy and six others were treated medically.

The main cause of unexpected death is pulmonary embolism[1,12]. It has an impact, as described in the literature, between 0.4 and 3.1% of

patients[1,5,6]. In this study it was 0.4%, two died from it. Reoperation was necessary in 2.59% of cases, less than mentioned by Nguyen (6.6%)[10].

The operative mortality rate reported in the literature varies from 0.1% to 2%, depending on the procedure and patient characteristics[1,2,6]. In this series there were eight deaths in the immediate postoperative period (30 days), six due to fistula and two to pulmonary thromboembolism.

CONCLUSIONS

The main complication was fistula, which occurred in 2.59% of patients and THE mortality was 1.21%.

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