XIII CONGRESSO INTERNACIONAL DE ENDOCRINOLOGIA
*RIO DE JANEIRO-RJ*

# EVOLUTION OF DIABETIC PATIENTS AFTER BARIATRIC SURGERY: CASE-CONTROL RETROSPECTIVE STUDY

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***INTRODUCTION:*** Diabetes is closely linked to obesity and followed by co morbidities that severely interfere with patient's life quality. It has been shown that bariatric surgery, besides being the only recognized way of handling morbid obesity, also presents excellent results in the control of diabetes.
***OBJECTIVE***: The aim of the study is to analyze the evolution of comorbidities and serological examinations of diabetic patients after bariatric surgery.
***MATERIAL AND METHODS:*** A retrospective analysis of 263 obese patients submitted to bariatric surgery (Fobi-Capella´s approach) from Jan/04 to Mar/07 was carried out emphasizing comorbidities, serological examinations and postoperative evolution. Data analysis was made with Kruskal-Wallis test.
***RESULTS:*** The patients were divided in 3 groups: G1 - Diabetic (30 patients); G2 – Glucose intolerants (45); G3 – normal glucose values (188). Mean age was 36 years (16-59); Average body mass index (BMI) was 42,4 (35-61,1Kg/$m^2$). Mean preoperative comorbidities were significantly higher in G1 when compared to the other groups. [5,43 ± 1,3 (G1); 3,84 ± 1,5 (G2); 3,17 ± 1,8 (G3)]. In the preoperative setting, mean fasting glucose were 131,2 ± 37,6 mg/dl (G1), 107,2 ± 5,2 mg/dl (G2) and 88,0 ± 10,5 mg/dl (G3) [p<0,001]. Mean fasting insulinaemia were 22,9 ± 18,6 mUI/ml (G1), 21,9 ± 9,2 mUI/ml (G2) and 19,3 ± 12,2 mUI/ml (G3) [p=0,11]. Hyperinsulinaemia was present in 12.7% of normal (G3). In the diabetic group (G1), 13 patients (43%) had HbA1C levels higher than 6.5%, 21 (70%) were preoperatively using oral hypoglycemic drugs and 5 with concomitant use of insulin; nine (30%) had chronic complications (diabetic retinopathy/nephropathy/peripheral neuropathy). After gastroplasty, 22 patients (73%) had improved glucose metabolism in up to 6 months. Thirteen patients were able to discontinue medication immediately after surgery. Mean relative weight loss (RWL) in the first month in G1 group was 27.5 ± 7.3%, 22.8 ± 5.0% in G2, and 23.9 ± 5.0% in G3 [p=0,001]. In the forth month, G1 group had a mean lost of 49,5 ± 6,3% of weight, G2, 43.5 ± 8.0%; and G3, 46.2 ± 8.1% [p=0,06]. In the first year, the average RWL in G1 group was 70 ± 17.7%, in G2, 67.2 ± 17.4% and in G3, 72.5 ± 15.9% [p=0,68]. Average post-operative follow-up time was 403 ± 263 days, with 93.5% of the patients.
***CONCLUSION:*** Diabetic patients present more comorbidities and bariatric surgery represents a chance of improvement. Even though in the long-term there was no significant difference in Average relative weight loss, chronic complications of diabetes may be prevented with its control.