

METABOLIC ANALYSIS OF OBESE PATIENTS WITH HEPATIC STEATOSIS SUBMITTED TO BARIATRIC SURGERY

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Background: Non-alcoholic fatty liver disease (NAFLD) has a prevalence of 50-75% in obese patients and obesity and insulin resistance are major risk factors for metabolic syndrome in NAFLD. The purpose of this study is to compare the metabolic profile of patients with and without hepatic steatosis before bariatric surgery

Methods: 435 patients were evaluated with abdominal ultrasound. This exam results was correlated with anthropometric data (BMI and abdominal circumference-AC), biochemical tests, duration of surgery and incision size

Result: There were 362 women (83,2%). The mean age was 37.1 ± 10.4 years; BMI was 42.0 ± 4.7 . 279 patients (64,1%) had hepatic steatosis (**group E1**). Thus, 222 (61,3%) were women and 57 (78,0%) were men [$p=0,0096$]. The mean BMI from **E1** was $42,0 \text{ kg/m}^2$ compared to $41,9 \text{ kg/m}^2$ in the group without fatty liver (**group E2**) [$p=0.43$]. The mean ages in **E1** and **E2** were 38,7 years and 34,2 years respectively [$p<0,0001$]. Triglyceride mean level was $178,0 \pm 121,4 \text{ mg/dl}$ in **E1** and $132,9 \pm 67,7 \text{ mg/dl}$ in **E2** [$p<0.0001$]. TGO mean level was $27,2 \pm 13,7 \text{ U/l}$ in **E1** and $21,4 \pm 6,8 \text{ U/l}$ in **E2** [$p<0,0001$]. The mean TGP level in group **E1** was $36,7 \pm 24,5 \text{ U/l}$ and in **E2** $26,3 \pm 14,8 \text{ U/l}$ [$p< 0,0001$]. AC mean in **E1** was $111,7 \pm 11,9 \text{ cm}$ and in **E2** $107,2 \pm 9,3 \text{ cm}$ [$p=0,0045$]. Surgical procedure mean duration in **E1** was 3,0 hours and in **E2** was 2,9 hours [$p=0,97$]. Mean incision size was $10,7 \pm 1,8 \text{ cm}$ in **E1** and $10,0 \pm 1,6 \text{ cm}$ in **E2** [$p=0,0001$]. HOMA-IR mean level was $5,3 \pm 4,7$ in **E1** and $4,16 \pm 3,1$ in **E2** [$p=0,0002$]. Metabolic syndrome was present in 256 (58,8%) patients, in which 188 (67,3%) were from **E1** and 68 (43,5%) were from **E2** [$p<0,0001$].

Conclusion: NAFLD was more prevalent in men. Age, triglycerides levels, TGO, TGP, AC, HOMA-IR and incision size were significant statistically different in patients with hepatic steatosis. The percentage of patients with metabolic syndrome were higher in **E1** compared to **E2**. There were no differences in mean BMI and surgery duration in both groups.