Abstract

Background: Iron bioavailability in obese subjects after the ingestion of a nutritional supplement was the aim of this work. Methods: Fourteen persons were studied before and after bariatric surgery after the ingestion of a nutritional formulation containing 25 mg iron, 25 g fiber and 800 mg calcium. Results: The following ferremia values (median and minimum - maximum) were obtained before and after bariatric surgery, respectively: Fasting, 105 (70 - 364) g/dL and 198 (38 - 617) g/dL; 1 hour, 103 (63 - 305) g/dL and 160 (11 - 207) g/dL; 2 hours, 103 (62 - 150) g/dL and 141 (10 - 412) g/dL; 3 hours, 97 (63 - 190) g/dL and 153 (6 - 270) g/dL; 4 hours, 91 (58 - 163) g/dL and 156 (40 - 251) g/dL (p>0.05), with no association of serum iron levels with time. There was a difference in total triglycerides (95 ± 29 mg/dL and 60 ± 10 mg/dL) which were correlated with a decrease in serum ferritin levels (r = 0.926, p = 0.008), UIBC (r = 0.910, p = 0.01), total cholesterol (r = 0.918, p = 0.01) and LDL-c fraction (r = 0.830, p = 0.04), with an increase in HDL-c fraction (r = 0.807, p = 0.05). Conclusion: Iron bioavailability in obese subjects was affected by the ingestion of the nutritional formulation containing calcium and fiber, a fact that may cause these patients to develop iron deficiency.

Keywords