

# ASSESSMENT OF PULMONARY FUNCTIONS IN OBESE PATIENTS AFTER LAPAROSCOPIC GASTRIC SURGERY

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## Abstract

Background: Obesity is an important, worldwide public health problem. Obesity affects all body systems, but mainly cardiovascular and respiratory systems. Aim: We aimed to investigate the change in respiratory functions due to both the decrease in body-mass index (BMI) and laparoscopic obesity surgery that is used in obesity treatment. Methods: Patients were selected who applied to Ondokuz Mayıs University General Surgery Clinics and were referred to pulmonary medicine clinics for preoperative evaluation. The mean age of patients was  $35.3 \pm 9.3$ . 32 patients who applied for laparoscopic obesity surgery with BMI > 40 kg/m<sup>2</sup> were monitored. Pulmonary symptoms of patients were evaluated pre-operatively and post-operatively; their BMIs were calculated and pulmonary function tests, lung diffusion testing and 6 minutes walking test (6 MWT) were applied. The data obtained at the end of the study were assessed under computer setting by SPSS 15.0 program. Chi-Square, Mann Whitney U, Wilcoxon Signed Ranks, Paired T and Student T tests were used in statistical analysis of data. Results: Average age of patients was  $35.3 \pm 9.3$  and 28.1% of the patients (n=9) were men, 71.9% (n=23) of them were women. The fact that majority of patients who participated the study were women was related with more frequent morbid obesity in women in general; we also saw that women patients applied to the hospital for obesity surgery at a higher ratio. When data of preoperative and post-operative were compared, BMI of patients decreased by 28%; FEV1 value, FEV1 percentage, FVC value and FVC percentages increased by 11.9%, 14.8%, 14.8% and 17.3% respectively, and these results were accepted as statistically significant. Conclusion: Recovery in respiratory functions due to decrease in BMI was observed after laparoscopic sleeve gastrectomy in obesity. More effective routes must be followed in fighting against obesity which affect all the body systems mainly including cardiovascular and respiratory systems.

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