Abstract

Objective: To evaluate whether the application of bilevel positive airway pressure in the postoperative period of bariatric surgery might be more effective in restoring lung volume and capacity and thoracic mobility than the separate application of expiratory and inspiratory positive pressure. Method: Sixty morbidly obese adult subjects who were hospitalized for bariatric surgery and met the predefined inclusion criteria were evaluated. The pulmonary function and thoracic mobility were preoperatively assessed by spirometry and cirtometry and reevaluated on the 1st postoperative day. After preoperative evaluation, the subjects were randomized and allocated into groups: EPAP Group (n=20), IPPB Group (n=20) and BIPAP Group (n=20), then received the corresponding intervention: positive expiratory pressure (EPAP), inspiratory positive pressure breathing (IPPB) or bilevel inspiratory positive airway pressure (BIPAP), in 6 sets of 15 breaths or 30 minutes twice a day in the immediate postoperative period and on the 1st postoperative day, in addition to conventional physical therapy. Results: There was a significant postoperative reduction in spirometric variables (p<0.05), regardless of the technique used, with no significant difference among the techniques (p>0.05). Thoracic mobility was preserved only in group BIPAP (p>0.05), but no significant difference was found in the comparison among groups (p>0.05). Conclusion: The application of positive pressure does not seem to be effective in restoring lung function after bariatric surgery, but the use of bilevel positive pressure can preserve thoracic mobility, although this technique was not superior to the other techniques.

Keywords

Bariatric surgery; physical therapy specialty; spirometry.