

## Long term outcomes of laparoscopic adjustable gastric banding for treatment of morbid obesity in adolescents

**Dewi Chrestiana**

Children Hospital of Philadelphia, USA

**Background:** Obesity in adolescents increased dramatically and has become commonplace in the last decade. Children with BMI >99<sup>th</sup> percentile tend to become obese adults with more health complications, as well as higher mortality rate than those who become obese in adulthood. Nonoperative managements through a well-supervised diet, psychological counseling, and physical activity program have been shown to have poor long-term sustainability and low success rate in significant percentage of adolescents. Laparoscopic adjustable gastric banding (LAGB) is considered a minimally invasive procedure that does not alter the anatomy and physiology of the intestine, therefore it is considered safer in pre-adult population. We designed a study to evaluate the current outcomes of LAGB in obese adolescents.

**Methods:** Using PubMed, MEDLINE, and CHINAHL databases, a systematic review of 14 articles from 2005 to 2012 was performed. Keywords used were adolescent, children, and laparoscopic gastric banding. The primary endpoint was long-term weight loss outcome of LAGB for treatment of morbid obesity in adolescents.

**Results:** A total number of 617 morbidly obese adolescents were included in this analysis with average BMI of 46.74kg/m<sup>2</sup>. Mean operative time was 62.7 minutes and length of hospital stay was 32.88 hours. Overall complications were seen in 76 patients (12.32%), which included band slippage or pouch dilation 30(39.47%), vitamin or mineral deficiency 11(14.47%), problems with port requiring revision 8(10.53%), gastroesophageal reflux 5(6.58%), dehydration 4(5.26%), band leakage 3(3.95%) and others 7(9.2%). At 3, 6, 9, 12, 18, 24, 36, 48, and 60 months postoperatively, average excess weight loss was 22%, 28.75%, 32%, 43.03%, 52.17%, 50.98%, 60.78%, 63%, and 66.2%, respectively. Suboptimal excess weight loss outcome after LAGB is more frequently related to lack of social supports, failure to change eating habits, and failure to incorporate recommended exercise.

**Conclusion:** LAGB is safe and effective in morbidly obese adolescent to achieve adequate excess weight loss with acceptable rate of postoperative complications.

dewichrestiana@yahoo.com