

PERFECT BARIATRIC SURGERY NOT A MIRAGE

Mr.Mahantesh Appanna Naganuri, Dr. Yayathee.S

“Choice, not chance, determines destiny.” – E.C. McKenzie

Abstract

As the problem of obesity growing in India, there is a need for effective interventions to manage obesity and related health issues. Bariatric surgery is one such procedure which is proven very effective in all age groups. Even though surgery is not common in Indian pediatric population, its success in adults and rare complications making it need for the hour. It's the responsibility of parents and surgeons to take decision on bariatric surgery in children by considering the complications of obesity and post operative problems related to surgery. Effective lifestyle modifications and considerable post-operative follow up will lead us towards progressive outcome.

Keywords: Bariatric surgery, Post-operative, Restrictive surgery, Malabsorptive surgery

Introduction

Obesity is now developing at a rapid pace and it's become growing concern worldwide ¹.Adults, adolescents and even children are widely affected. Obesity in adolescents and children might lead to many health consequences like high blood pressure, dyslipidemia, diabetes, fatty liver disease, obstructive sleep apnea, and psychosocial problems. Globally focus on prevention of obesity in children and adolescents is taking a shape but quality of those preventive measures is still doubtful, as numbers keep increasing there is immediate need for substantial measures^{2,3}.

Many treatment options are available for children and adolescents. Life style modifications and non-pharmacological options are chosen as first option but outcomes^{4,5,6} of these measures are not satisfactory. Treatment using drugs in combination with lifestyle modifications has a satisfactory results but it has more side effects when compare with using only lifestyle modifications as measure. Many surgical interventions are available for children and adolescents but very less quality studies have been done to reveal its long term effects^{7,8}.

Recent Bariatric surgery success in many adolescents has sparked a debate to perform bariatric surgery in children. Bariatric surgery has been performed even in children of five years age. Performing bariatric surgery in this age group will help in their mental n physical development and change their life to great extent⁹.

What is bariatric surgery?

Surgery on the stomach and/or intestines to help a person with extreme obesity lose weight. This surgery can be performed on people with Body Mass Index of above 40. If person is having a BMI of 35-40 and having a complications of type 2 diabetes or heart disease bariatric surgery can be performed on such patients to reduce further complications¹⁰.

There are two types of Bariatric surgeries. In restrictive surgery they will physically restrict the size of the stomach and slowing down digestion. In malabsorptive/restrictive surgeries in addition to restrict the size of the stomach they also remove parts of the digestive tract, which will interfere with absorption of calories ¹⁰.

Several studies have revealed that bariatric surgery is highly effective in helping severely obese children to lose weight than behavioral and dietary modifications alone. According to researchers surgery will reduce obesity related health problems in children even better than adults. Recent study shows that extremely obese children show substantial improvements in quality life and depression during the period of first year after having surgery¹¹.

Factors to consider before surgery

➤ Risks and Benefits

It's always better to measure the risks of surgery against the risks of obesity before choosing to go for surgery in children. Today bariatric surgery is considered to be safe but few risks are associated with it like blood clots, leakages, bleeding and even death. The surgery risks and psychosocial risks of surgery in children are same like adults¹¹.

➤ Child's Motivation

Success of bariatric surgery largely depends on the patient's commitment to long-term lifestyle modifications after the surgery. Surgeon will assess whether patient is emotionally mature enough to follow his instructions on behavioral modifications after surgery.

➤ Support of network

There should be continuous support from parents, guardians, pediatricians and behavioral therapist throughout the surgery and most importantly even after that¹¹.

Why Bariatric surgery?

Treatment for childhood obesity mainly includes lifestyle and diet modifications. But recent success of bariatric surgery in adults and growing complications in obese children is pushing the community to opt for bariatric surgery in children.

Children with obesity face so many problems like Diabetes, fatty liver, dyslipidemia, hypertension, fatty liver, obstructive sleep apnea and many. Three decades ago Type 2 diabetes was very rare in children but now children in very young age turning diabetic. The damage caused by these chronic illnesses is not reversible even if individual lose weight in adulthood it will affect blood vessels, kidney, liver and heart. Apart from these problems children also face psychological issues which will keep them separated from peer groups. By considering all these threats its responsibility of parents and pediatricians to decide whether to go for surgery or to manage it by lifestyle modifications¹².

Worldwide more than 100 randomized clinical trials were published in last ten years and a 19 randomized control trials(RCTs) compared operative and non operative interventions with medical care. Every RCT revealed a substantial difference between the interventional and medical care groups. Evidences show that bariatric surgery is effective in improving many health related issues and help to reduce death rate. Indian studies which involved 2143 patients revealed that over 30% of excess weight loss was observed just after 3 months of procedure and after follow up of 12 months it reached to 59-80%¹².

It's not a Cake walk

Like any other surgeries bariatric surgery carries risks. These complications can occur immediately after surgery or can find after many years of surgery. Risks vary according to the type of surgery patient have undergone. Some complications can be managed just by symptomatic measures while some need surgeries.

Short-term complications include Infections of wound, bleeding beyond normal limits, Breathing difficulties and long term complications include Diarrhea, Nausea, Vomiting, Malnutrition, Hernias of abdomen. Only 3% patients' show serious and life threatening complications like pulmonary embolism, New surgical connection leaks, bleeding from ulcers and heart attack. Some other common problems are gall stones and flagging skin. Depending on its severity and age of patient to tolerate problems surgeon will decide the course of treatment for above complications¹³.

In a study conducted by Lakdawala et al reoperation to treat delayed leak from gastro esophageal junction was reported from 3 to 21 days after surgery. In 1-2% cases one of the most serious complication leakage was identified. Most commonly found complication during literature review was port wound infection. After one month of post operative period pulmonary embolism and internal hernia through retro colic window was also observed. Complications related to nutritional deficiencies were reported which should be taken care in post operative program¹².

Conclusion

Studies related to bariatric surgery are rare. By including more data and studies in Indian scenario we can convince parents and society leaders for the need of bariatric surgery. When potential benefits are given more importance over immediate complications we can see more children and adolescents undergoing bariatric surgery. As per IRDAI's (Insurance Regulatory and Development Authority of India) new guidelines of 2019, Bariatric surgery is included under health insurance cover which is a big boost for healthy India which we all are dreaming for.

References

1. WHO. Obesity and Overweight. Geneva: World Health Organisation; 2003. [Google Scholar]
2. Ibele AR, Mattar SG. Adolescent bariatric surgery. *Surg Clin North Am.* 2011;91(6):1339–1351. doi: 10.1016/j.suc.2011.08.005.
3. Daniels SR. Complications of obesity in children and adolescents. *Int J Obes (Lond)* 2009;33(Suppl 1):S60–S65.
4. Waters E, de Silva-Sanigorski A, Hall BJ, Brown T, Campbell KJ, Gao Y, Armstrong R, Prosser L, Summerbell CD. Interventions for preventing obesity in children. *Cochrane Database Syst Rev.* 2011;12:CD001871.
5. Inge TH, Krebs NF, Garcia VF, Skelton JA, Guice KS, Strauss RS, Albanese CT, Brandt ML, Hammer LD, Harmon CM. Bariatric surgery for severely overweight adolescents: concerns and recommendations. *Pediatrics.* 2004;114(1):217–223. doi: 10.1542/peds.114.1.217.
6. Han JC, Lawlor DA, Kimm SY. Childhood Obesity – 2010: Progress and Challenges. *Lancet.* 2010;375(9727):1737–1748. doi: 10.1016/S0140-6736(10)60171-7.
7. Oude Luttikhuis H, Baur L, Jansen H, Shrewsbury VA, O'Malley C, Stolk RP, Summerbell CD. Interventions for treating obesity in children. *Cochrane Database Syst Rev.* 2009;1:CD001872.
8. Whitlock EA, O'Connor EP, Williams SB, Beil TL, Lutz KW. Effectiveness of weight management programs in children and adolescents. *Evid Rep Technol Assess.* 2008;170:1–308.
9. Mitchell F. Obesity: Bariatric surgery in youth. *Nat Rev Endocrinol.* 2012;8(7):381.
10. William C. Shiel Jr. Medical definition of bariatric surgery. *MedicineNet.* 2018
11. Krisha McCoy. Weight loss surgery for teens: *Everyday health.* 2010.
12. Anish Desai, Reshmi Pillai, Sandeep Sewlikar, Nilesh Mahajan. Obesity and surgical management in Indians : *Journal of obesity and metabolic research.* 2015; 2:1, 22-29
13. Nayana Ambardekar. Pros and cons of weight loss surgery: *WebMd.* 2019.