Introduction

Obesity is a growing menace and is supposed to be hurting the life, quality of life, creating an economic burden on the concerned person and on the country. Obesity was once considered to be the disease for the classes, but now has strongly emerged as the leading cause of medical problems and physical disability even for the masses. In a very short span of time, Obesity has emerged as the biggest killer disease and has turned out to become the leading cause of preventable death in the world only 2nd to smoking which causes cancer. Obesity is associated with and a cause of serious medical diseases like Type 2 Diabetes Mellitus, Osteoarthritis, Obstructive Sleep Apnoea, Medical Renal diseases, Hypertension, Infertility, Heart diseases, Cancer and many more.

Obesity being a disease and root cause of many other medical problems, must be treated like a disease and thus has to be graded. Treatment options depend on the grade of disease which means that treatment is different for various stages or grades of Obesity. Dietary modification, medications, behavioral treatment, lifestyle modifications hold great value in patients with lesser BMI but fail to give results in patients with BMI more than 30 where Bariatric Surgery (Laparoscopic Weight Loss Surgery) becomes the golden standard not only in reducing weight, but also reducing the comorbidities associated with Obesity.

Bariatric Surgery is a branch of surgery which deals with major weight loss. Bariatric Surgery, when compared to behavior therapy, drugs, diet and lifestyle modifications has shown promising and sustainable long-term results. There has been growing concerns about cost of Bariatric Surgery amongst the general population where the very short-sighted approach is seen in comparing cost of surgery v/s cost of medicines, diet, physical training and behavior therapy. Ideal comparison would be one which compares the cost incurred in treating obesity and cost incurred in treating complications of obesity along with amount lost due to loss of productivity due to physical inactivity in Obese v/s cost of Bariatric Surgery and follow ups involved in Bariatric Surgery treatment. A 5-year study was carried out comparing 100 patients of approximate same level of Obesity (BMI 40-45) and approximately of same range of age between 35 - 50 years. This study consisted of 50 patients who underwent Bariatric Surgery v/s 50 patients who due to cost factors refused to undergo Bariatric Surgery.

Treatment outcomes were noted on basis of:

a. Weight reduction
b. Body mass Index reduction
c. Complications of treatment
d. Complications of diseases

Improvement in medical co morbidities like (Heart diseases, hypertension, diabetes, Infertility, dyslipidemia, sleep apnea) 

Cost of treatment was calculated on basis of Cost of treatment (Bariatric Surgery v/s medical) cost of complications because of treatment (treatment of complications of surgery v/s treatment of complications of obesity due to delay in ideal treatment). Also noted were the costs involving absence from work due to comorbidities of obesity v/s absence of work due to surgery. Decreased productivity due to physical inability to perform work at optimum levels leading to decreased growth at work and decreased incentives at work due to obesity was also considered.

Cost of surgical branch was calculated: Average cost of surgery: Rs 3 lakhs, Cost of follow-up and medications (if required to maintain nutritional stability) @ Rs 1000/ month for 5 years equaling: Rs 60,000/- Incidence of complications of surgery was as low as 0.42% @ Rs 45,000/- on an average to treat complications. This brought the max average cost of treating patients with Bariatric Surgery to be Rs 4,05,000/-over 5 years.

With this was calculated cost saved with early return to work, decrease in morbidities, decrease in treatment of comorbidities, cost saved in regular medications and hospital visits and also amount earned due to increased productivity at work including promotions, incentives and lesser leaves. This was compared to patients treated in non-Bariatric Surgery group which opted for conservative treatment methods like lifestyle modification, behavior therapy, diet, exercise etc. even in a BMI of 40-45.
a. Cost of various weight loss methods over 5 years due to unsuccessful attempts at weight loss included

b. Cost of dieticians (Average 6 dieticians changed over 5 years with treatment with each for 4-6 months with phases of improper unsupervised diet): 25000 x 6 = Rs 1,50,000

c. Cost of joining gyms and keeping physical trainers: 12000 x 5 = 60,000

d. Cost of treating obesity related complications (medicines and doctor visits: approx. 2500 per month x 5 years = 1,50,000

e. Cost of surgeries for treatment of obesity related complications like knee replacement, cardiac bypass, angioplasties, stroke @ average of Rs 2.5 lakhs

f. Recurring cost of medications post treatment of complications of obesity was calculated at an average of Rs 6500/- per month for an average period of 2 years was calculated at Rs 1,56,000

g. Cost of taking leave from work, decreased productivity with decreased incentives and decreased growth at work was also noted

h. On an average, Cost of treatment in Bariatric Surgery group to a maximum was Rs 4,05,000 over 5 years

i. Cost of treatment in non-surgical group to a minimum was Rs 7,66,000 over 5 years

j. The amount earned by Bariatric Surgery group as incentives, promotions, increased productivity has not been mentioned

k. The amount lost by non-surgical group due to leave from work, decreased productivity, decreased incentives, decreased promotions and decreased productivity has also not been mentioned

Conclusion

Bariatric Surgery gives far fetching long term sustainable results leading to optimizing weight, decreased morbidity, early return to work, increased productivity and increased performance at work. This robust long-term study suggests that Bariatric Surgery is an ideal, indicated, cost effective treatment for weight loss in Obese patients. It not only decreases the cost of treating complications, but also increases the earning of the patient due to increased performances and productivity and lesser periods of staying away from work. Bariatric Surgery not only reduces weight, but also treats various complications of obesity leading to decrease in medical problems associated with obesity and increases the quantum of life and improves the quality of life. Bariatric Surgery is an extremely safe treatment for Obese patients with a very minimal percentage of complications.