

REPORT FROM CHINA

Surgical treatment for obesity started quite recently in China. However, since reported in the 1980s for the first time, gastrointestinal surgery has greatly developed as the golden standard in obesity treatment. In 2000, our centre took the first laparoscopic vertical banded gastroplasty (LVBG) in China. In June 2003, the adjustable gastric band was introduced by us and the first laparoscopic adjustable gastric banding (LAGB) in China was also performed in our center. During the next 10 years, we also did Roux-en-Y gastric bypass, mini gastric bypass, sleeve gastrectomy, etc. All of these operations were done with laparoscopy.

From June 2003 to June 2010, a total of 219 patients received gastrointestinal surgery for obesity in our centre. The data were analyzed, including 201 with laparoscopic adjustable gastric banding (LAGB), 13 with laparoscopic mini gastric bypass (LMGB) and 5 with laparoscopic sleeve gastrectomy (LSG). Mean body mass index (BMI) of the patients who received LAGB was 37.9kg/m², which dropped to 32.4kg/m² and 29.7kg/m² at 6 and 12 months respectively. Mean BMI of the patients with LMGB was 34.7kg/m², which fell to 31.6kg/m² and 26.9kg/m² at 6 and 12 months after surgery. Mean BMI of the patients who underwent LSG was 43.8kg/m², which turned to 38.1kg/m² and 34.3kg/m² at 6 and 12 months after operation. Post-operative complications occurred in 26 LAGB patients (12.9%), 2 LMGB patients (15.4%), and 1 LSG patients (20.0%). No death occurred. The treatment was safe and effective.

The guideline for surgical treatment of obesity in China was published in 2007. The selection criteria of patients were defined for the first time. Firstly, the obesity patients with complications (metabolic syndromes) such as T2DM and hyperlipidemia are recommended for the obesity operations. Secondly, a waist measurement more than 90cm in men and 80cm in women suggests that the patients should receive the operations. Thirdly, the patients with triglyceride level higher than 1.70mmol/L or fasting HDL-ch level lower than 1.0mmol/L are also recommended for operation. Fourthly, the patients with weight growing steadily in the past 5 years and BMI more than 32 kg/m² should consider the bariatric surgery. The patients selected for surgical treatment should be between 16 and 65 years old. Five surgical methods are introduced in the guideline, including adjustable gastric banding (AGB), roux-en-y gastric bypass (RYGBP), mini gastric bypass (MGB), sleeve gastrectomy (SG), and biliopancreatic diversion (BPD) or biliopancreatic diversion with duodenal switch (BPD-DS). In our guideline, BPD or BPD-DS is not strongly recommended in China due to the high incidence of complications and severe malnutrition after surgery.

With the development of the obesity surgical treatment, more and more evidence suggest that gastrointestinal surgery not only can cause weight loss, but can relieve, even cure type 2 diabetes mellitus. In the above 219 patients, 43 LAGB patients had T2DM before operation. After surgery, 11 (25.6%) showed clinical partial remission (CPR) and 16 (37.2%) reached clinical complete remission (CCR). 10 LMGB patients

had T2DM before operation. While 2 patients (20.0%) got CPR and 7 (70.0%) reached CCR after surgery. 3 LSG patients suffered from T2DM before operation. 1 patient (33.3%) got CPR and 1 (33.3%) reached CCR after operation.

In 2010, the consensus for surgical treatment of T2DM in China was published. The selection criteria of patients were discussed for a long time and finally came to an agreement. Overall, all the T2DM patients who cannot get a cure with treatment by medicine could try the surgical treatment. However, the patients younger than 65 years, suffered from T2DM less than 15 years, and with C-peptide higher than half its normal lower limit are expected to have more effective results. The T2DM patients with BMI less than 27.5kg/m^2 are not recommended for the surgical treatment. Two surgical methods are strongly recommended, including roux-en-y gastric bypass (RYGBP) and mini gastric bypass (MGB).

In our opinion, laparoscopic gastrointestinal surgery could provide good weight loss and a therapeutic effect for T2DM. And the operation is safe with few complications. Surgical treatment for metabolic diseases has a huge potential for development.

Dr. Zheng & Dr. Ding
Minimally Invasive Surgery Department
Changhai Hospital, Shanghai