Title: Laparoscopic Sleeve Gastrectomy with Duodenojejunal Bypass for Type 2 diabetes with BMI under 35 kg/m^2

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Abstract:

Background

We introduced laparoscopic sleeve gastrectomy with duodenojejunal bypass (LSGB) for Japanese obese patients with a risk of gastric cancer in 2007. Forty-three patients underwent LSGB from April 2007 to December 2010. Regarding anti-diabetic effect, the remission rate of Type 2 diabetes (T2DM) was 93%. This result showed that LSGB could achieve comparable or better remission of T2DM, compared with other bariatric procedures. The metabolic surgery for patients with BMI lower than 35 kg/m^2 is still controversial. We evaluated the effect of LSGB on T2DM with BMI under 35.

Methods

Seven patients with T2DM underwent LSGB. The preoperative mean BMI and weight were 33.4 ±1.5 kg/m^2 and 97.4 ±11.0kg, respectively. There were six patients with T2DM and one patient with IGT. The data on T2DM, lipid profile and blood pressure of the subjects were studied before and 12 months after surgery.

Results

The mean excess weight loss at 12-month follow up point was 82.7%. The mean fasting plasma glucose and HbA1c before and 12 months after surgery were 154.7 mg/dl, 8.1% and 128.5 mg/dl, 6.1%. The remission rate of T2DM was 83%. The mean systolic blood pressure and LDL before and 12 months after surgery were 147.5 mmHg, 158.4 mg/dl and 131.0 mmHg and 140.0 mg/dl. There was one patient who could not achieve the remission of T2DM with 20- year history and preoperative insulin required status (more than 100 U/day). The other CVD risk factors related to T2DM were improved clinically.

Conclusion

This result showed that LSGB for low BMI patients with T2DM could achieve the considerable remission rate of T2DM and reduce the other CVD risk factors.