

Diabetes control and lessened cerebral cardiovascular risks after gastric bypass surgery in Asian Taiwanese with a body mass index <35 kg/m²

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Background: Morbid obese patients with type 2 diabetes mellitus (T2DM) and a body mass index (BMI) >35 kg/m² benefit greatly from Roux-en-Y gastric bypass surgery (RYGB). Whether the patients with T2DM and a body mass index (BMI) <35 kg/m² also profit from this surgical procedure is not known. In Asian Taiwanese, the risks associated with T2DM and cardiovascular diseases occur at a relatively lower BMI levels. We examined the safety and efficacy of RYGB in Asian Taiwanese patients with T2DM and a BMI of 22-35 kg/m² in a referral medical center. Methods: A total 62 consecutive patients with T2DM and a BMI of 22-35 kg/m² underwent RYGB between 2003 and 2009. The data were prospectively collected before surgery and at 3, 6 and 12 months after operation. Results: Of the 62 patients, 15 were men and 47 were women (age 40.1 ± 10.1 years). Their preoperative characteristics were BMI 30.2 ± 3.2 kg/m², body weight 81.8 ± 11.8 kg, waist circumference 100.6 ± 10.4 cm, and duration of T2DM 5.9 ± 6.0 years. There was no mortality, major surgical morbidity, or excessive weight loss experienced. The BMI decreased postoperatively by 20%, from 30.2 ± 3.2 kg/m² to 24.0 ± 2.8 kg/m² (P < .001). The fasting blood glucose level decreased from 194.7 ± 70.4 mg/dL to 99.8 ± 28.4 mg/dL (P < .001), and the hemoglobin A1c decreased from 9.1% ± 1.7% to 6.0% ± 0.9% (P < .001). The 10-year cerebral and cardiovascular disease risk was estimated with UKPDS risk engine before and after RYGB. The risk for fatal and nonfatal stroke and coronary heart disease decreased essentially. Conclusion: RYGB safely and effectively remits T2DM in Asian Taiwanese with a BMI <35 kg/m². It also lessens the 10-year cardiovascular cerebral disease risks. More larger, longer term, prospective and randomized studies are needed to confirm these effects.