Background: Obesity is a risk factor for the development of diseases such as type 2 Diabetes Mellitus. Bariatric surgery with laparoscopic single anastomosis gastric bypass is an effective treatment for morbid obesity and diabetes type 2 complete remission, and it has been proven to generate an improvement in glycemic levels and glycosylated hemoglobin (HbA1c) keeping the weight loss for a long time.

Material and methods: In a period of time between June 2002 until May 2012, 2070 patients underwent surgery with LOAGB technique. Between January 2010 an May 2012, 415 patients were included in the European Accreditation Council for Excellence Centers for Bariatric Surgery (EAC-BS) database, from which 79 patients with a glycemic level disturbance in the preoperative blood sample where chosen. Of this group, 47 patients were pre-diabetic (fast plasma glucose ≥ 110 mg/dl ≤ 125 mg/dl) and glycosylated hemoglobin (HbA1c) levels between 5.7-6.4% and 32 were diabetic (fast plasma glucose ≥ 126 mg/dl) and glycosylated hemoglobin (HbA1c) levels ≥ 6.5%. We described the weight evolution, the excess body mass index lost percentage (%EBMIL) the glycemia and the glycosylated hemoglobin levels; and we reported regular laboratory controls during the first year after surgical intervention.

Results: Both patient groups achieved their lowest mean weight loss 12 months after surgery, being average weight in the pre-diabetic group 62,41 ± 10,93 and 68,36 ± 11,16 in the diabetic group. Since 3 months after surgery, pre-diabetic patients achieve a mean BMI < 30, according to the Spanish Society for Obesity Study (SEEDO 2007) this amount is outside of the definition of obesity. Not being the case of the diabetic patients who don’t achieve this result until 6 months after surgery. The weight loss was excellent in both study groups, achieving an excess body mass index loss percentage (%EBMIL) greater than 65%, since the first three-month postoperative control. Glycemia levels descend in both groups, achieving the pre-diabetic group a mean glycemia level of < 110 mg/ dl in the second day after LOAGB surgery. Pre-diabetic patients maintain more stable glycemia with better controls, and very favorable outcomes 12 months after surgery....

Keywords
Type 2 diabetes mellitus. Laparoscopic one anastomosis gastric bypass. Surgical glycemia control. Glycosylated hemoglobin HbA1c. Weight loss.