Editorial

Diabetes surgery: minimum information on diabetic patients sample
BMI 24-29 or BMI 30-34 for doing studies comparable

M. Garcia Caballero

Departamento de Cirugía, Facultad de Medicina, Málaga, Spain.

In order to clarify the primary endpoint of our operations, when we use bariatric procedures for treating obesity, it is worldwide called Obesity Surgery. For identifying the bariatric surgery when it is primary used for treating Diabetes Mellitus (DM), I think we should call it Diabetes Surgery. In both cases we perform metabolic surgery.

DM is not a lineal and homogeneous disease. We have find patients with 37 years disease without metabolic syndrome (MS) nor diabetes complications, and other with only 5 years diagnosed disease already blind and 5 days/week dialysis. It could not be the same disease although we call always Diabetes Mellitus. Hence it is of maximum interest to be able to judge the effect of the different bariatric surgery procedures to have enough information on the diabetic patients included in the sample of the study.

Apart from C Peptide levels and other parameters discussed in other chapter of this monographic issue, first distinction need to be, to differentiate between overweight patients (BMI 24-29) and already simple obese patients (BMI 30-34). Because simple obesity implies a preoperative excess weight of more than 20 kg and the consequences development of insulin resistance mechanism that could be the responsible of the type 2 diabetes mellitus. The elimination of this insulin resistance with the weight loss provoked by bariatric surgery, could already solve the problem without takes into account other mechanisms. While diabetic patients BMI < 30 that do not have so much excess weight and the consequent insulin resistance, it is more probable of having an important decrease of beta cells mass as responsible of their DM. So far, none of the studies or reviews that analyzed the results of bariatric surgery for treating DM in patients BMI < 35 does this distinction, considering both groups of patients equal for comparison.1-4

The second important source of error is the proportion of non insulindependent and insulinindependent number of patients of the population sample included in the study. Patients that need insulin for controlling the levels of glycemia translate pancreas deterioration, decrease beta cell mass and consequently reduced possibility of stimulating it by surgical gastrointestinal changes. While those that need only oral antidiabetic drugs for controlling their DM means that their pancreatic beta cell mass still produces enough insulin for maintaining the glycemic control, what means that it still exists a beta cell mass stimulable by surgical gastrointestinal changes that could explain their results.

Information on years of evolution of the disease as well as of years in treatment with insulin, speak on the aggressiveness of DM and/or resistance of beta-cell and other tissues to deterioration and, similarly, the possibility of success of the surgical gastrointestinal changes. None of studies published so far supply this kind of information.

We can argue in the same direction on the exact information about the accompanied comorbidities, as part of the metabolic syndrome, that presented preoperatively the patients including in the study population sample, and the resolution rate after surgical gastrointestinal changes. Although in this regard we can find more information especially on the postoperative resolution rate.

Very limited data, if some, is given on the specific diabetes complications (cardiopathy, retinopathy, nephropathy, neuropathy, peripheral vasculopathy, severe hypoglycemia episodes, etc) and the postoperative effect of the surgical gastrointestinal changes. Also very important information due to the limitations that they provoke for the everyday life of the patients and the great advantage that bring the surgery. And for having an idea if gastrointestinal surgery could also have an effect in their resolution. Especially taken into account that the most important part of the high costs of DM management are related to the treatment of its complications.5

Anyway, in our personal experience we have found many surprises in the evolution of patients after gastrointestinal bypass surgery (since February 2008 when we operate our first patient specific to treat DM by One Anastomosis Gastric Bypass (BAGUA) for treating diabetes that makes preoperative prediction of surgical results for solving DM really challenging.

This point is one more reason for describing the patient population sample with a minimum of clinical
data to be able to compare the results of different gastrointestinal surgical procedures used. Important will be also to analyse and give information on those cases in which the preoperative prediction do not correlate with the expected postoperative results.

In my opinion standardization of the remission criteria have not sense if we do not standardize first, an enough and exact information on the diabetic patient sample. That is the main reason why some studies produce unexpected good results67 and could also explain the wide variability using the same procedure.8 10 We can have 0% or 100% DM resolution rate (no necessity of diabetes treatment, basal glycemia < 125 mg/dl, HbA1c < 6.5 or 7%) depending from the necessity of diabetes treatment, basal glycemia < 125 mg/dl, HbA1c < 6.5 or 7% depending from the patients we included in a study. Obviously the results need to be related with the clinical characteristics of the patient, and this is not the case at present.

The other data we need for comparison are on immediate postoperative complications and medium and long term effects of gastrointestinal surgical changes related to the degree of gastrointestinal symptoms and nutritive state. In this sense we can also incorporate data on quality of life before and after surgery using the specific test developed and validated in different languages for bariatric procedures.7 10

References