



EDITORIAL

Joint Position Statement of the SEEN-SECO-SEEDO-SED Societies on metabolic surgery for type 2 diabetes mellitus[☆]



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Posicionamiento de las sociedades SEEN-SECO-SEEDO-SED sobre la cirugía metabólica en la diabetes mellitus tipo-2

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There is increasing interest in Spain on the possibility of using gastrointestinal surgery as a treatment able to reverse or improve type 2 diabetes mellitus (T2DM). However, because of the lack of a duly established consensus including this option in treatment algorithms, some professional groups have shown great interest in positioning metabolic surgery as a universal procedure useful in a high number of diabetic patients. Representatives of the scientific bodies signing this manuscript therefore decided, at the beginning of 2013, to write a position statement clearly reflecting the indications for surgery in T2DM in our environment, thus laying the foundations for a subsequent consensus document.

Metabolic surgery consists of the application of surgical procedures aimed at the treatment of T2DM and improvable cardiometabolic risk factors. It is indicated mainly in

patients with obesity ($BMI \geq 35 \text{ kg/m}^2$), especially if T2DM or its comorbidities are difficult to control with lifestyle changes and drug treatment.^{1,2} Although metabolic surgery is not recommended in T2DM patients with BMI ranging from 30 to 35 kg/m^2 because no adequate long-term data are available on the reduction of cardiovascular morbidity and mortality and/or the benefits in microvascular complications,¹⁻³ it may be considered in some situations. Thus, after analyzing the positive experience in some case series and in short- and medium-term clinical trials in terms of improvements in blood glucose control and associated comorbidities, we think that patients with T2DM and BMI of $30-35 \text{ kg/m}^2$ may be eligible for metabolic surgery if they meet the following requirements: (i) they are patients in whom evaluation by an endocrinologist in the setting of an interdisciplinary team has ruled out forms of diabetes other than T2DM (type 1 diabetes, LADA, MODY etc.), and (ii) they are patients who show a progressive impairment in blood glucose control (glycosylated hemoglobin [HbA1c] $> 7.5\%$) despite optimized conventional treatment and in whom other major comorbidities not adequately controlled (atherogenic dyslipidemia, high blood pressure, sleep obstructive apnea) coexist with standard treatment.^{4,5} Today, surgery in patients not meeting these criteria should

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be performed in the setting of controlled investigational protocols to compare it with conventional treatments based on lifestyle changes and standard drug treatment. It should also be noted that remission rates are lower when diabetes was diagnosed more than 10 years before, the patient is on insulin treatment, and there is evidence of a low pancreatic reserve.

Remission, rather than cure, should be used to assess the results of metabolic surgery. The T2DM remission criteria proposed in this position statement are those established in 2009 by an expert panel of endocrinologists, bariatric surgeons, oncohematologists, and diabetes educators under the auspices of the American Diabetes Association.⁶ These criteria take into account fasting HbA1c and plasma blood glucose values, the need for drug treatment, and diabetes duration.

"Partial T2DM remission" will therefore be defined as an HbA1c value not diagnostic of T2DM, i.e. <6.5%, basal glucose levels ranging from 100 to 125 mg/dL (5.6–6.9 mmol/L), and the absence of drug treatment for at least one year of follow-up. By contrast, "complete T2DM remission" will be defined as the presence of an HbA1c value <6.5%, basal glucose levels <100 mg/dL (<5.6 mmol/L), and the absence of drug treatment for at least one year of follow-up. "Long-term T2DM remission" is defined as remission lasting for at least five years. Finally, "T2DM improvement" is reported when patients have HbA1c values <7% on drug treatment. In any case, metabolic surgery in T2DM should contribute to the achievement in the greatest number of patients of the minimum goals for adequate metabolic control (with/without adjuvant active treatment): HbA1c <7%, LDL-C <100 mg/dL, triglycerides <150 mg/dL, HDL-C >40 mg/dL (males) and >50 mg/dL (females), and blood pressure <140/80 mmHg.

An additional significant point emphasized in the consensus of all four scientific bodies is that metabolic surgery should be performed by an experienced bariatric surgeon (according to skills criteria accepted by the SECO) who performs a surgical procedure with a mortality rate <1%, a morbidity rate <10%, and an annual repeat surgery rate <2%. As regards the procedure to be used, we think that metabolic surgery should be based on already known procedures,

which may be adapted to the new conditions of weight and metabolic control required by the patient. New surgical procedures should only be used in clinical trials. Metabolic surgery should also be performed in the context of an interdisciplinary cooperation of bariatric surgeons with other specialists, such as endocrinologists, cardiologists, pneumonologists, internists, radiologists, and basic and clinical researchers so that they can share their experiences and results.

As a final consideration, it should be stressed that the scientific bodies signing this document deem it necessary to assess the gradual and rational introduction of metabolic surgery as an effective alternative treatment in stepped-care algorithms for T2DM.

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