Top Ten Things to Know

Metabolic Surgery in the Treatment Algorithm for Type 2 Diabetes: A Joint Statement by the International Diabetes Organizations

1. 69% of U.S. adults are either overweight or obese. 8.5% of U.S. adults have physician-diagnosed diabetes mellitus (DM). The global burden of DM is projected to rise from 285 million in 2010 to 439 million in 2030.

2. Despite growing evidence that metabolic surgery (i.e., bariatric or weight-loss surgery) has immediate, short-, and intermediate-term benefits on insulin resistance, diabetes control, and cardiovascular disease (CVD) risk factors (including sleep apnea, hypertension, dyslipidemia, and atrial fibrillation), existing diabetes treatment algorithms do not include surgical options.

3. A multidisciplinary group of international experts participated in the 2nd Diabetes Surgery Summit (DSS-II) to discuss the benefits and limitations of metabolic surgery (i.e., bariatric or weight-loss surgery) for type 2 diabetes (T2D). They developed a treatment algorithm to inform patients, clinicians, and policymakers.

4. The algorithm identifies 2 groups for whom metabolic surgery is recommended to treat T2D:
   - Patients with Class III obesity (body mass index [BMI] >40 kg/m²) regardless of the level of glycemic control.
   - Class II obesity patients (BMI 35 – 40 kg/m²) with inadequately controlled hyperglycemia despite lifestyle and optimal medical treatment.

5. The algorithm also identifies 2 groups for whom metabolic surgery may be considered to treat T2D:
   - Class II obesity patients (BMI 35 – 40 kg/m²) with adequately controlled hyperglycemia.
   - Class I obesity patients (BMI 30.0 – 34.9 kg/m²) if hyperglycemia is inadequately controlled despite optimal treatment with either oral or injectable medications.

6. These BMI thresholds should be reduced by 2.5 kg/m² for Asian patients.

7. The algorithm does not support metabolic surgery for Class I obese patients with adequate glycemic control.

8. By the Summit’s unanimous consensus, the Roux-en-Y gastric bypass operation is recommended as the metabolic surgical procedure of choice. Use of the Laparoscopic Gastric Banding (Lap Band) and Vertical Sleeve Gastrectomy (VSG) procedures may be considered; however, the experts noted that there is uncertainty about long-term effectiveness of these procedures.

9. Postoperative follow-up should include a coordinated care approach across providers (e.g., primary care providers, endocrinologists, internal medicine specialists, hepatologists, and nephrologists) to monitor the patient’s glycemic control and potential complications, especially in patients with a history of microvascular complications, non-alcoholic fatty liver disease (NAFLD)/non-alcoholic steatohepatitis (NASH), or obesity-related kidney disease.

10. There are several important areas for future research in metabolic surgery, including:
    - Evaluation of non-BMI criteria for surgery in patients with T2D,
    - Investigation of the long-term effectiveness and safety of metabolic surgery in adolescents compared with other treatment options, and
    - Determination of the optimal procedure and time-for-intervention for individual patients.