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SURGICAL TECHNIQUE

Single anastomosis duodeno-ileal bypass – Sleeve gastrectomy: Surgical technique



A. Lee-Bion Jr.^a, B. Menahem^{a,b,*}, Y. Le Roux^a,
N. Contival^a

^a Service de chirurgie viscérale et digestive, CHU Caen, avenue de la Côte-de-Nacre, 14000 Caen, France

^b INSERM UMR1086, Normandie University, UNICAEN, CEA, CNRS, CHU Caen, centre François-Baclesse, 3, avenue du Général-Harris, 14045 Caen cedex, France

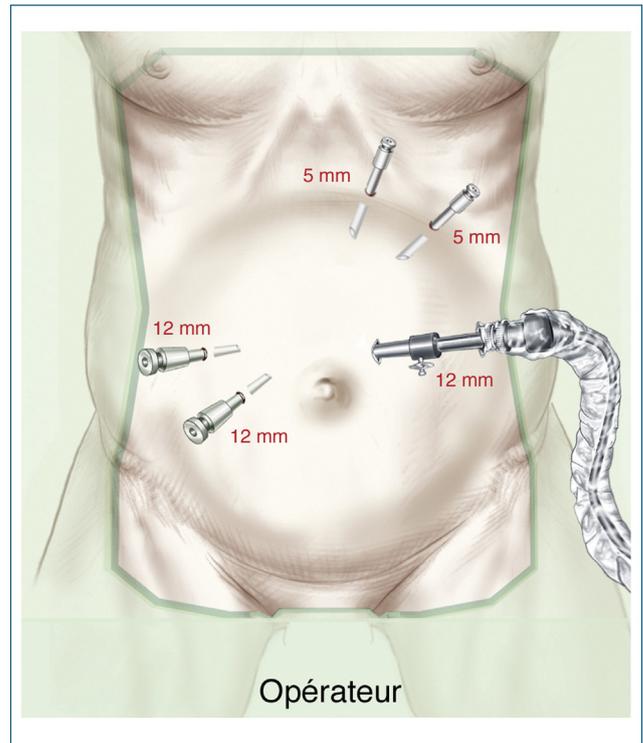
Available online 1 March 2019

Single Anastomosis Duodeno-Ileal Bypass - Sleeve Gastrectomy (SADI-SG) is a malabsorptive bariatric surgical procedure, one of several variations of different bilio-pancreatic diversions. It can be performed as a first-line bariatric procedure but is also indicated as a second-stage procedure after failure of Sleeve Gastrectomy (SG) in patients with super-obesity (Body Mass Index [BMI] greater than 50 Kg/m²).

* Corresponding author. Department of Digestive Surgery, CHU de Caen, avenue de la Côte-de-Nacre, 14032 Caen cedex, France.
E-mail address: menahem-b@chu-caen.fr (B. Menahem).

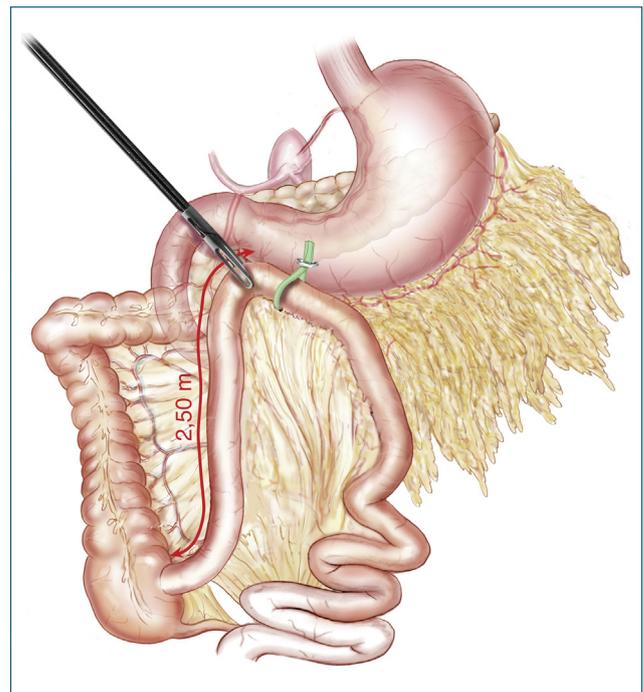
1 Patient installation and trocar placement

The patient is installed in a semi-sitting position with the legs apart; the operator stands between the legs. The optical trocar is positioned three handbreadths below the xiphoid tip, lateralized slightly to the right. Then, three 12-mm operating trocars are placed, one on the right side, the other two on the left, above and below the umbilicus. A 5-mm trocar is placed in the left subcostal region.



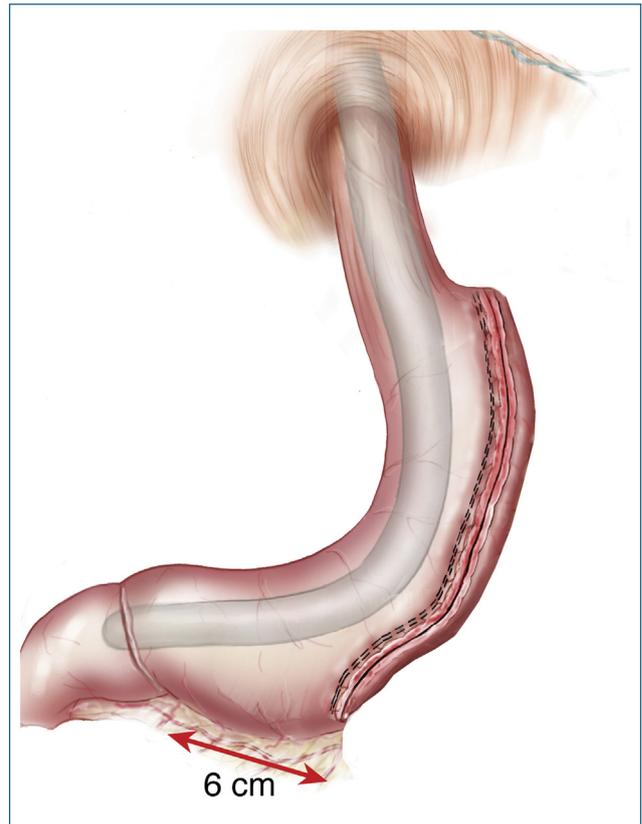
2 Exposure and assessment of small intestinal mobility

The first step is to assess the mobility of the intestinal loop to see whether it can be easily brought up to the level of the duodenal bulb (D1). During this phase, the operator moves to the patient's left. A 2.5-meter length of distal ileum is measured from the ileo-cecal valve and then a clip is placed on the mesentery at this level to identify the position of the duodeno-ileal anastomosis.



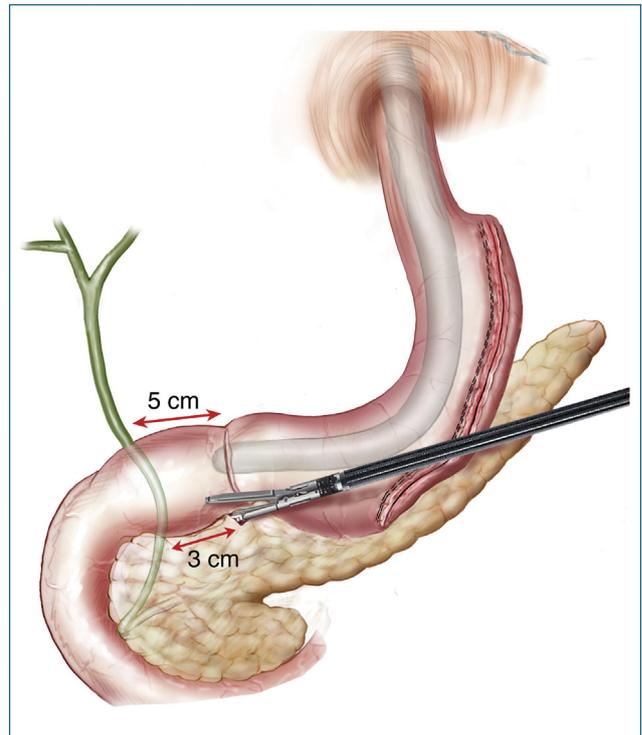
3 Gastrolysis and sleeve gastrectomy

Gastrolysis of the greater curvature is performed with thermofusion and then the SG is performed over a 36-French calibration tube with preservation of the antrum.



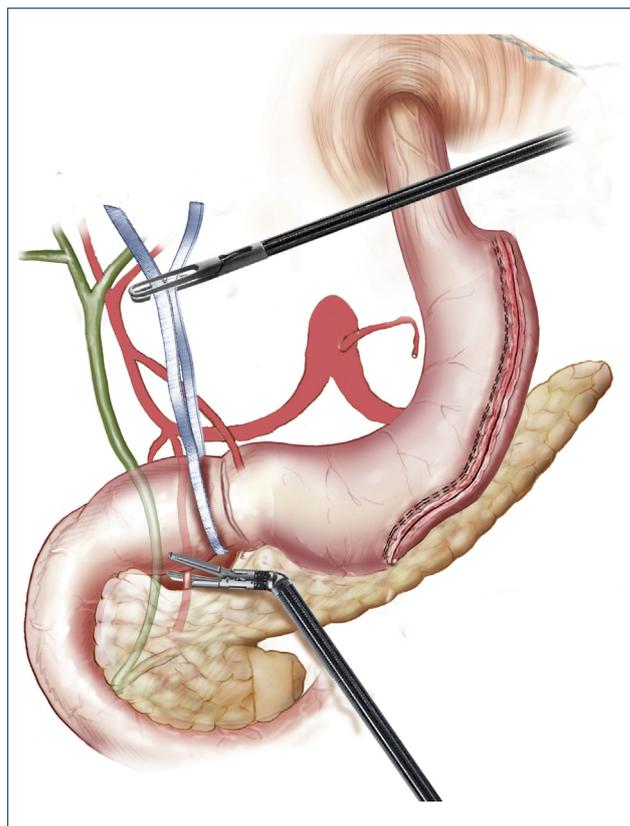
4 Dissection of D1

The first portion of the duodenum is dissected using thermofusion along its lower edge to free it from the underlying pancreas. Its upper edge is then freed taking care to preserve the integrity of the hepatic pedicle. The encircling dissection is kept as small as possible to avoid devascularizing the duodenum. But D1 must be sufficiently mobilized to allow performance of the duodeno-ileal anastomosis without tension.



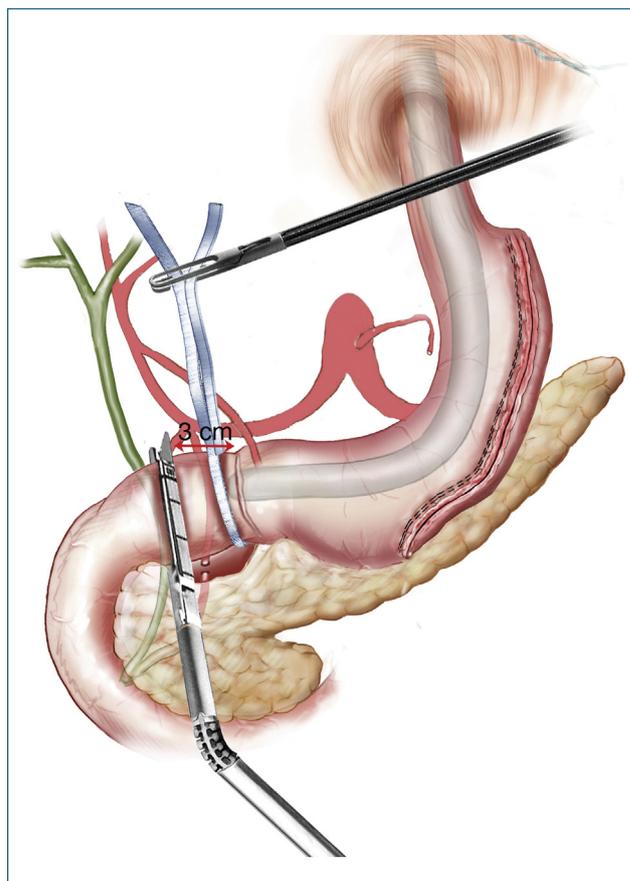
5 Ligature of the right gastroepiploic pedicle

The right gastroepiploic pedicle is divided by thermofusion after careful dissection.



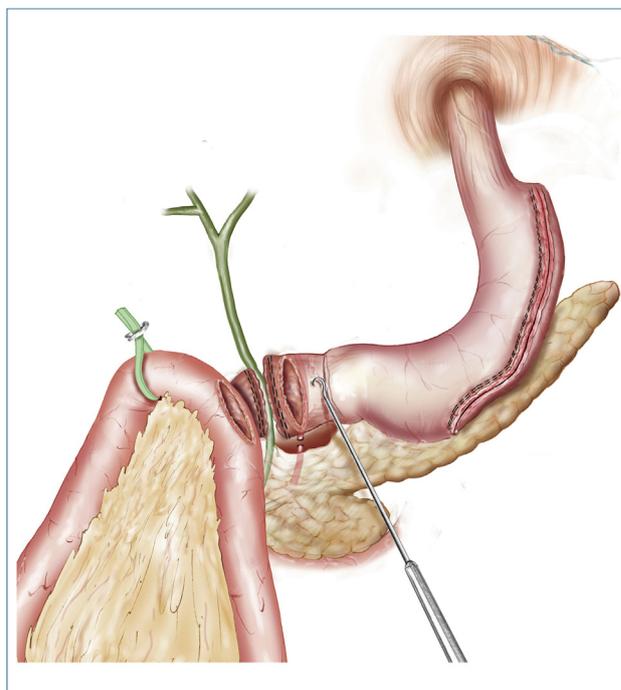
6 Post-pyloric duodenal transection

D1 is elevated with a tape to allow vertical passage of a stapler and is then transected with the stapler about 3 cm downstream of the pylorus. The good vascularization of D1 must then be verified.



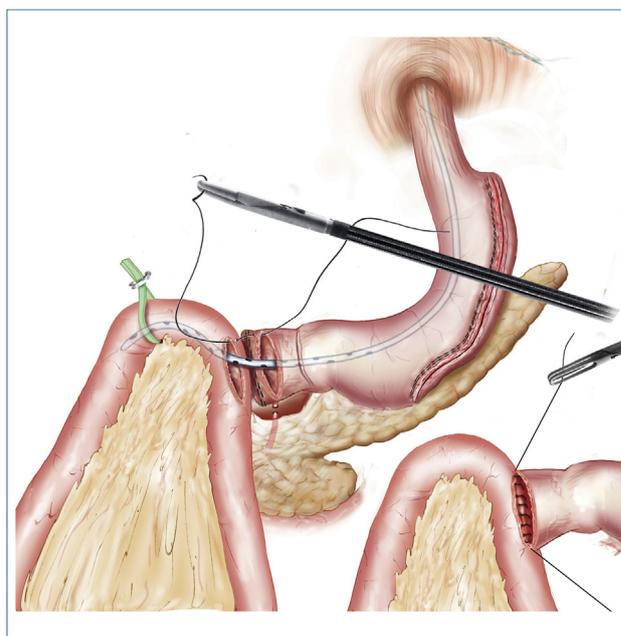
7 Duodeno-ileal approximation

As the ileal limb is brought up to D1, care must be taken to avoid mesenteric torsion. After the ileal loop is approximated to the duodenum, a 10–15 mm duodenotomy and enterotomy are performed.



8 Duodeno-ileal anastomosis

Manual end-to-side duodeno-ileal anastomosis is performed using two 2/0 absorbable hemi-circumferential sutures. The diameter of the anastomosis is calibrated over an 18-French nasogastric tube. The completed anastomosis is leak-tested with intraluminal instillation of methylene blue. The nasogastric tube is removed at the end of the procedure.



Conclusion

SADI-S is a new and innovative technique in bariatric surgery. Three specific risks must be kept in mind and avoided: bile duct injury; bleeding during the mobilization of the duodenum; the risk of D1 ischemia during mobilization and stapled transection.

Disclosure of interest

The authors declare that they have no competing interest.

Further reading

Sánchez-Pernaut A, Herrera MA, Pérez-Aguirre ME, Talavera P, Cabrerizo L, Matía P, et al. Single duodeno-ileal bypass anastomosis with sleeve gastrectomy (SADI-S). One-to-three-year follow-up. *Obes Surg* 2010;20:1720–6. <https://doi.org/10.1007/s11695-010-0247-3>.