

Biliopancreatic Diversion with Duodenal Switch

Surgical Technique and Perioperative Care



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KEYWORDS

- Biliopancreatic diversion • Duodenal switch • Surgical technique
- Malabsorptive surgery • Management

KEY POINTS

- Patient selection is key to obtaining good clinical outcomes.
- Sleeve gastrectomy (SG) alone can be used as a staged approach in selected cases or to assess patient compliance with follow-up and supplementation.
- Long-term nutritional follow-up with vitamins and minerals supplements is mandatory.



Video content accompanies this article at <http://www.surgical.theclinics.com>

INTRODUCTION

The duodenal switch technique, without gastric resection, was originally described for the treatment of bile gastritis, by DeMeester and colleagues in 1987.¹ In addition, Dr Scopinaro and colleagues² described in 1979 a technique of biliopancreatic diversion. This procedure combined a distal gastrectomy, a gastrojejunostomy, and a jejunojejunostomy to create a 50-cm common channel and a 250-cm alimentary channel. This technique resulted in excellent outcomes, but the resection of the pyloric valve and the short, 50-cm, common channel resulted in postgastrectomy syndrome, significant risks of marginal ulcer, and increased gastrointestinal side effects.³ The technique was thus modified in the late 1980s, to perform a longitudinal gastrectomy instead of a distal gastrectomy and to increase the common channel to 100 cm.^{4,5} By preserving the pyloric valve and first duodenum, the normal emptying of the stomach is preserved, the risk of marginal ulcer is decreased, and gastrointestinal side effects are reduced.³ In short, biliopancreatic diversion with duodenal switch (BPD-DS) includes

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3 specific components: (1) a longitudinal gastrectomy (SG) to provide some caloric restriction while decreasing acid production and maintaining a normal gastric emptying; (2) a 250-cm total alimentary limb whose role is to decrease caloric absorption; and (3) a 100-cm common channel where food bolus mixes with biliopancreatic juices, resulting in decreased protein and fat absorption (Fig. 1). The malabsorptive and hormonal effects of BPD-DS result from separating the flow of food from the flow of bile and pancreatic juices. This results in a reduction of caloric and food absorption, in particular lipids, and metabolic changes through modifications in incretin levels.

In 2001, Dr Gagner⁶ performed the first BPD-DS by laparoscopy, but the procedure has long been long been considered the most challenging bariatric procedure. Improvements in patient selection and preparation, surgical instrumentation, and 2-stage surgery, however, have now made laparoscopic approach standard, even for patients with very high body mass index (BMI).

SURGICAL TECHNIQUE

Preoperative Planning

The goal in modern bariatric surgery should be to select the right procedure for the right patient. This can significantly improve patient compliance with vitamin

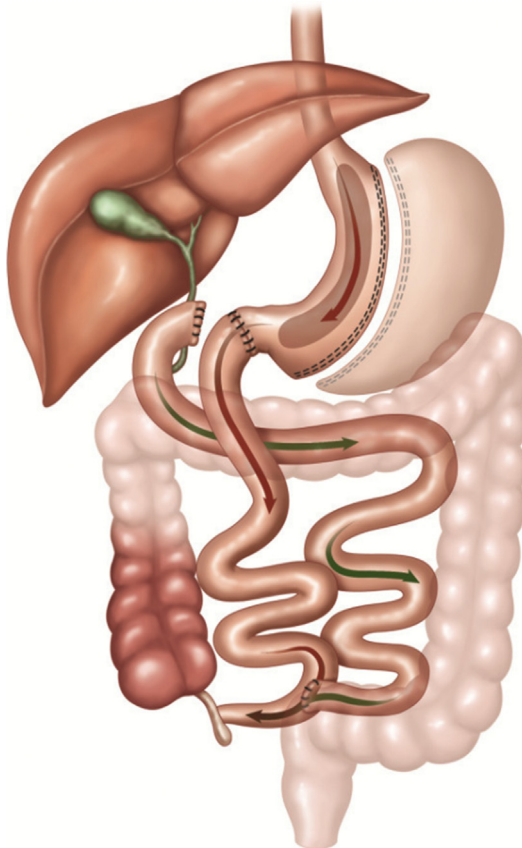


Fig. 1. BPD-DS. SG is performed and the first duodenum is anastomosed to the last 250 cm of small bowel. A 100-cm common channel is created.

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