Types and Criteria of Intestinal Bypass Surgery

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Description

Intestinal bypass is a bariatric surgery performed on patients with morbid obesity to create an irreversible weight loss, when implementing harsh restrictions on the diets have failed. The first technique used was jejunocolic anastomosis. However, it resulted in several unanticipated side effects such acute electrolyte imbalance and liver failure. After that, jejunoileal procedures were added. Many intestinal bypass surgeries were performed between the 1960s and the 1980s and were thought to be a revolutionary method of treating obesity. Patients saw significant weight loss, but this operation also had various unintended consequences, including dietary shortages and metabolic issues. Due to the presence of surgical alternatives and anti-obesity medications, intestinal bypass is now rarely used.

Types of intestinal bypass

Intestinal bypass surgery techniques: The proximal duodenum, which is the portion of the small intestine closest to the stomach, is anastomosed with the distal ileum, which is the portion of the small intestine closest to the large intestine, in a procedure known as intestinal bypass surgery. Bypassing between 85 and 90 percent of the small intestine results in a blind loop. As a result, there is a significant reduction in nutrient absorption, which causes an apparent loss of weight. Intestinal bypass comes in four different forms. They are, in order, biliopancreatic diversion, end-to-side jejunoileal bypass, end-to-end jejunoileal bypass, and jejunocolic bypass.

Jejunocolic bypass: Considered to be the first type of intestinal bypass surgery, the jejunocolic bypass was initially carried out in 1963. The proximal duodenum and transverse colon are anastomosed during this procedure (a part of the large intestine). However, the procedure was a complete failure, leaving patients with acute electrolyte imbalance and metabolic disruption.

Jejunoileal bypass from side to side: To address the drawbacks of jejunocolic bypass, this kind of surgery was developed. It connects the side of the distal ileum to the end of the proximal duodenum in an operation that was first carried out in 1969. However, several surgeons questioned the success of this procedure due to the likelihood of ileal substance refluxing into the blind loop.

End-to-end jejunoileal bypass: The end-to-side jejunoileal bypass and this procedure both first emerged at the same time. Because it prevented ileal content from refluxing into the blind loop, some surgeons thought it was a superior option than end-to-side jejunoileal bypass. The distal ileum and proximal duodenum are anastomosed in order to do this. The transverse colon receives the blind loop's drainage. However, two trials found that the weight loss effects of end-to-side and end-to-end jejunoileal bypass were comparable.

Diversion of the biliopancreas: Biliopancreatic diversion, first described in 1980, consists of an intestinal bypass and a gastrectomy. Firstly, gastrectomy removes a large portion of the stomach. Reduction in stomach capacity decreases the appetite of patients. Patients’ appetites decline as their stomach capacity is reduced. The proximal duodenum and the distal ileum are anastomosed during intestinal bypass surgery. The blind loop is drained to the transverse colon. However, two studies revealed that both end-to-side and end-to-end jejunoileal bypass had similar weight loss effect.

Criteria

Despite being extremely effective in helping people lose weight, intestinal bypass surgery is dangerous and permanent. Therefore, before the surgery is performed, it requires careful evaluation and selection. The standard selection criteria are as follows:

- More than 100 pounds overweight
- Acceptance of all the post-treatment treatments and the associated side effects.
- Evidence of the failure of all past weight-loss endeavours.
- Stable state of mental health.
- Psychiatric assessment demonstrating the obese condition.
- Absence of all treatable endocrinopathies of every kind.