



## Ileal Pouch Anal Procedure: Technical Aspects

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### Editorial

The complications of Ileal Pouch Anal Anastomosis (IPAA) or Park's procedures are related to technique. In order to reduce such complications, the following points need to keep in mind while constructing a pouch:

1. Tension free anastomosis: Tension on the ileal mesentery is one of the critical concerns for creating a tension free anastomosis. The various technical points which need to be taken into consideration while performing the procedure are:

- a) The tip of the pouch should reach 6cms below the pubic symphysis for a tension free anastomosis at the dentate line.
- b) The terminal ileum should be transected as close to caecum as possible.
- c) The mesentery should be mobilized right up to transverse portion of duodenum & uncinate process of pancreas.
- d) Parietal peritoneum of distal ileum may be incised. Division of visceral peritoneum along right side of Superior Mesenteric Artery (SMA) allows mesentery to further increase in length. To achieve further length multiple small vessels close to superior mesenteric, ileocolic arcade (below 1<sup>st</sup> & 2<sup>nd</sup> arcade) can be divided.
- e) SMA can be divided in its distal part at or proximal to beginning of ileo colic arcade (gain of further 1.5 cm to 2 cm). While transecting big vessels use bull dog clamps to assess collateral circulation. Only one of two vessels should be divided.
- f) A window can be created still maintaining the blood supply to pouch.
- g) If there is tension on anastomosis (e.g. in obese patients), better do a distal rectal anastomosis preserving distal rectal stump.

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2. The two limbs of the pouch are opened in the mid portion for firing staplers to facilitate ileoanal anastomosis & allow any modification according the anal anatomy. Any residual septum (because distal 1.5 cm of stapler is non-cutting) is divided through rectum. Care must be taken to pull the mesentery away to avoid its incorporation in the staple line. Excess of short limb of J pouch should be resected.

3. In an S-shaped pouch the outflow limb should be no longer than 2 cm. Excess must be trimmed before anastomosis to prevent emptying difficulties.

4. Sometimes J-pouch cannot be formed properly, and then an S-shaped pouch should be made. Such a pouch should be anchored to the presacral fascia to prevent axial twist.

5. For transecting distal rectum incision should be made distal to the line of mucosectomy in the muscular tube. This opening is more appreciable than purse string suture on mucosal tube or any instrument introduced per anum which may push mucosal tube further proximally with spillage of colonic contents.

6. Omentum should be retained with the pouch procedure to reduce the incidence of sepsis. It does not influence the frequency of postoperative bowel obstruction.

7. Transanal manipulations for hand sewn anastomosis of anal canal including prolonged stretching, applying purse string, mucosectomy, and eversion of rectum all contribute to impaired bowel control. On the contrary effortless pouch construction and tension free anastomosis with precision & good blood supply is possible using stapling techniques. That is why, overwhelming majority of surgeons use this technique. Though the retained mucosa in the distal rectum & anal canal poses risk of colitis, dysplasia, malignancy & need continuous surveillance.

8. Damage to the nerves can be reduced by dissecting close to the rectum. Ileal anal anastomosis should be preferably made at the top of anal canal as dentate line anastomosis is associated with suboptimal functional results.

9. Dough nuts should be examined for completeness.

10. Diverting loop ileostomy: In view of high complication rate, it is always wise to add diverting ileostomy which allows the anastomosis to heal thereby reducing chances of leakage, sepsis, stricture formation & pouch dysfunction. It may be avoided in patients with good general condition, with no anastomotic tension, no toxicity & no blood loss. The problem associated with ileostomy formation & closure can be prevented by using tube ileostomy or

intra luminal bypass tube (Coloshield). Pouch anal anastomosis complications occur in 44% patients with incomplete fecal diversion than those with complete diversion (14%).

11. All staple line bleeding should be controlled and leak test performed before closing the abdomen.

With various advances in the surgical techniques, sterilization, anesthesia, availability of broad spectrum antibiotics and proper selection of the patients, the mortality has been reduced to 0% to 1.5%. In spite of high morbidity the overall consensus at present is that the pouch anal procedure when undertaken with recommended guidelines offers the best quality of life when compared with the alternatives.