

Stapled Anopexy- How I Do It?

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Abstract: The search for a less painful operation for hemorrhoids led to the development of a procedure called PPH (procedure for prolapse and hemorrhoids). Here a circular ring of mucosa above the dentate line is resected rather than complete removal of the hemorrhoids. Because the rectal mucosa lacks somatic innervation it results in less postoperative pain as compared to the open procedure. The principle behind this surgery results is that it helps in repositioning the hemorrhoids into a relatively low pressure zone in the rectum. This procedure also divides the terminal branches of the rectal arteries causing a reduction in blood flow into the hemorrhoidal tissues.

Stapled Anopexy is also known as the PPH procedure, stapled hemorrhoidopexy or circumferential mucosectomy. This procedure was first described by Dr. Antonio Longo, an Italian surgeon¹. This technique involves dilatation of the anal sphincter, submucosal purse-string placement, stapling and resection of the circumferential mucosa above the hemorrhoidal tissue. This restores the hemorrhoidal tissue back to its original anatomical position².

Position and Anesthesia: The patient is placed in the lithotomy position with a sandbag below the buttocks after general or regional anesthesia (Fig 1). Antibiotic prophylaxis is given with a Fluoroquinolone and an Imidazole (Ofloxacin+ Metronidazole) half an hour before induction of anesthesia.

Procedure: After the surgical preparation and draping of the parts, perianal infiltration of 10 cc of 2% Inj. Lignocaine is done at 3 and 6 o'clock position that helps in post operative analgesia (Fig 2). The internal sphincter is then dilated using a circular anal dilator with an obturator following adequate lubrication. After the obturator is removed the hemorrhoids can be seen prolapsing into the lumen.

We remove parts of its circumferential flange of the circular anal dilator



Fig 1-positioning of the patient in lithotomy position for PPH



Fig 2- perianal infiltration of Inj lignocaine 2% for adequate post operative analgesia



Fig 3- the specimen showing a complete donut.

that comes along with the PPH 03 device (Ethicon Endosurgery, Cincinnati, USA) so that it forms wings on either side of the dilator. This winged dilator enables its optimal positioning between the gluteal regions and allows it to be secured to the buttocks with stay sutures using silk 2-0. The transparent circular anal dilator (CAD) allows better visibility of the dentate line which appears as a whitish line 2 cms from the anal verge. The Purse-String Suture Anoscope is then introduced through the dilator. This anoscope will push the mucous prolapse back against the rectal wall along a 270° circumference. The purse string suture is taken using the 1-0 polypropylene suture that comes along with the PPH 03 stapler. One end of the suture is fixed to the drapes at 5 o'clock position, which is the site from where we start the purse string. The purse string is taken through the submucosa that protrudes through the window in the anoscope and carefully avoiding the underlying muscles. Particular care is taken in females to avoid the posterior vaginal wall in the suture. By rotating the anoscope, we complete a purse-string suture around the entire anal

circumference. We visually and digitally confirm that no thread is palpable ensuring that the entire purse string circumferential suture is placed submucosally.

After disengaging the anvil from the stapler for the maximum distance by rotating the circular knob at the end of the instrument anticlockwise, the anvil is then positioned beyond the purse string. The polypropylene suture is then tied with a closing knot. After threading the two ends of the suture through the instrument using the suture threader, the ends of the suture are also knotted externally. Moderate traction on the purse-string draws the prolapsed mucous membrane into the casing of the circular stapling device. The instrument is then closed by turning the black knob in a clockwise manner till the green bar is seen to come within the indicator window.

The safety latch is then released and the handle is closed to fire the instrument. The stapler is kept aligned to the anal canal while firing the instrument. Firing the stapler releases a double staggered row of titanium staples through the tissue and a circular knife excises the redundant tissue resulting in a characteristic 'crunch'. This causes a circumferential column of mucosa to be removed from the upper anal canal. Keeping the stapling device in the closed position for approximately 30 seconds before firing, acts as a tamponade, which ensures adequate hemostasis.

The instrument is then disengaged by gently turning the knob one and half times counterclockwise. Finally, the staple line is examined through the anoscope to check for bleeding. If bleeding occurs, additional absorbable sutures may sometimes be placed.

Post operative care: Postoperatively we put in an anal pack to control oozing from the staple line. The pack is made of Spongostan (Johnson and Johnson, Skipton, U K) which is an absorbable gelatin sponge which is wrapped in paraffin gauze. This pack is removed after 4 hours. Finally the donut is inspected for uniform thickness and length of the mucosa and its circumferential continuity (Fig 3). Discontinuity of the donut would indicate incomplete excision of the mucosa at that point and might need additional sutures to buttress the bleeding edges. The donut is sent for histopathological examination.

We routinely advice application of Metrogel topical gel (Galderma Laboratories, L.P. Fort Worth, Texas) for postoperative antisepsis and pain relief. Sitz bath is started from postoperative day 1 and syrup Cremaffin (Abbott India, Mumbai, India) 3 teaspoonful HS is given to prevent constipation.

REFERENCES

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