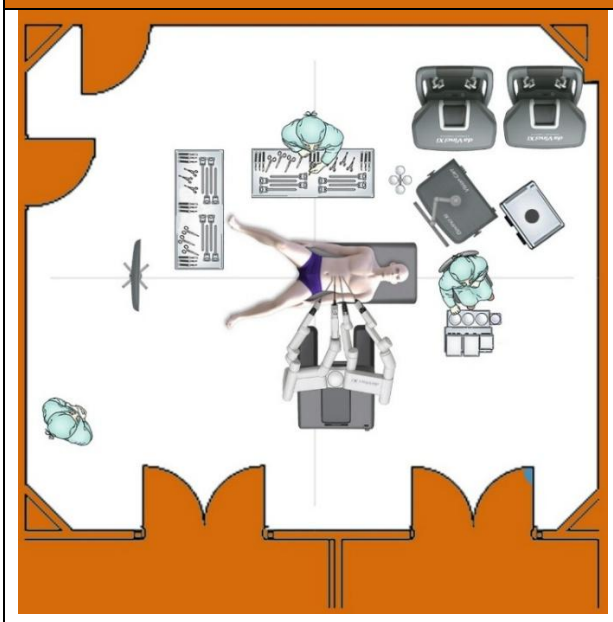
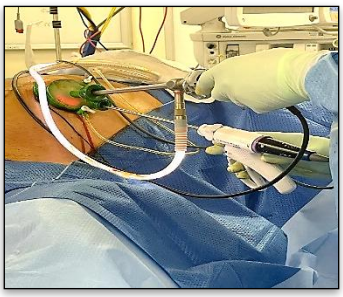
Arun Naik

Contents

Surgical Author: Arun Naik	**As of:** 2025 October 15

1. Hartmann's Surgical Reversal / Robotic / Arun Naik





Position: Both arms tucked in, Lithotomy position. bladder catheterized. The axis of the patient is aligned in such a way that an imaginary line can be drawn from the ankle to the knee and to the opposite shoulder as a straight line. The feet are placed flat on the stirrups and the legs kept down low enough that they do not interfere with the robotic arm movements

Part 1 of the procedure:

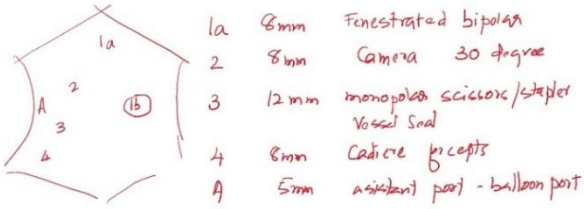
Colostomy taken down, anvil of ECS 9A circular stapler placed into the colostomy, purse string tightened. Gelpoint mini inserted into the stoma site 3, ports are placed through the gel point port. pneumoperitoneum is created and laparoscopy is done

Until laparoscopy is done, and decision to proceed with robot is not atken, robotic ports and instruments should not be opened.

Flexy sigmoidoscopy can be done in the beginning of the procedure to assess the length of the rectal stump and also irrigate and wash out all the mucus secretions. It also helps to rule out any a stricture in the rectal stump. This will help the safe advancement of the EEA stapler.

It is necessary to clear out adhesions to the entire abdominal wall before all the ports can be safely placed. If adhesions prevent visualisation of one or more of the proposed port sites, ports can be placed one after the other during adhesion lysis and clear out the regions along the entire abdominal wall until there is enough space to put the all the ports. Laparoscopic scissors are required for this. A small sponge and a Raytec is left in the peritoneal cavity (Instruments to open- hand held diathermy, suction, purse string applicator, ECS 29 circular stapler, Gelpoint Mini – it comes with its ports. Lap DeBakey, ATrack retractors, lap scissors, small pack, a raytec).

Part 2 of the procedure: Ports are placed in an oblique fashion from left upper quadrant to RIF as below, R1, R2 and R4 ports are 8mm, R3 is 12mm port which can be planned in a way that it comes through the ileostomy site in case it is likely be required. Assistant port (5mm, ballon port) is placed in between / and behind R3 and R4 in the right flank. an additional 8 M robotic port is placed through the Gel point mini in the previous stoma site.



The initial positioning is slightly head up position with the left side up tilt with the targeting done to the left flank. subsequently after the splenic flexure mobilisation, the robot is redocked at after changing the position to steep head down so as to retract all the loops of small bowel from the pelvis. R1 is changed to the robotic port put in the stroma site and the previous left upper quadrant port can be used as a second assistant port Targeting now will be centred around the pelvis.

Camera is placed through R2 and mono polar scissors through R3. Fenestrated bipolar in R1 and Tip up or Cadier forceps in arm 4. (1Left,2 Right approach)

The DaVinci XI cart should be positioned perpendicular from the left of the patient. This allows rotation of the arm towards the deep pelvis as well as splenic flexure. The assistant surgeon, scrub nurses and all sterile trays will be on the right side. A colonoscopy cart is located towards the feet of the patient and is available for evaluation of anastomosis.

Adhesiolysis proceeds with sharp dissection with monopolar scissors, when adhesions are clear. But blunt dissection can also be employed using the side of the robotic scissors to carefully push on the adhesions which made them separate. Sufficient traction is necessary to do adhesionolysis in this regard it is always safer to push the bowel away to generate traction as opposed to pulling towards you when possible

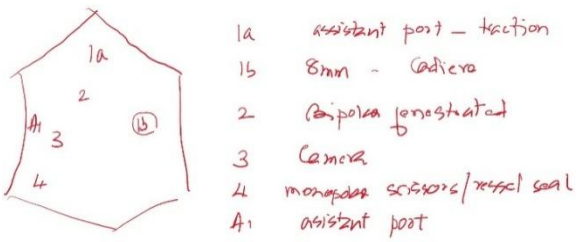
Free any small bowel that may be adherent to Colostomy site and omentum.Omentum is released from the colon and lesser sac is opened to expose the distal transverse colon.

Next step is splenic flexure mobilisation

The lesser sac is entered after the omentum is divided off the distal transverse. The spleno colic attachments are to be divided and left colon is mobilised after opening the left paracolic gutter. Vessel Seal device is useful for this part of the procedure. IMV is secured with vessel seal /stapler or Hemolock. It is important confirm that colon is mobilised enough to bring it down for tensionless anastomosis.

(Instruments to open- 4 x8mm robotic ports,1x 5mm ballon port, robotic 30-degree camera, Bipolar fenestrated, monopolar scissors, Vessel seal, Cadiere OR Tip up, lap suction, optionally robotic stapler-Sure Form 60mm White OR robotic hemoloc).

Part 3 of the procedure: Once the colon is completely mobilised the robotic instruments are removed, and robot is redocked after changing the position to steep head down. R1 is changed to port placed through the stoma site-gelpoint mini. (2 right, 1 left approach) robot is targeted to the pelvis. Next step would be rectal stump mobilisation. The rectal sizers or sizers in the vagina may sometimes be required to help identify the rectal stump.



Peritoneum on either side of the rectal stump is opened. Retro rectal space/TME space is opened. Dissect just enough to straighten the rectal stump. If the IMA or superior rectal pedicle is still intact, it can be secured with Vessel seal. This may help to open the posterior space. SureForm 60MM blue staplers is used to transact the excess rectal stump. this is the time to inject ICG and check the viability of the bounce using Firefly mode. Check the orientation of the colonic conduit to make sure it is not twisted.

Anastomosis is done with ECS29A circular staplers. Air test is done with the flexible sigmoidoscopy. Instruments are removed. It is possible to sometimes place additional reinforcing stitches over the anterior aspect of the anastomosis.

Robot is undocked. Sponge and raytec removed. The stoma site is closed with intermittent figure of 8 stitches with the No 1 PDS. Wound washed with cetrimide.12 mm port fascial defect is closed with to 0 Maxon figure of 8stitches. The skin incisions are closed with 3-0 Maxon.

Comfeel dressings for port sites. Tegaderm, and combined with hypafix for pressure on the stoma site (Instruments to open- Rectal sizers J@J, Sure Form staplers 60mm blue. Robotic needle holder -optional. Syringe for air test or flexible sigmoidoscopy. - Sutures- 3-0 PDS, no1 PDS,0-Maxon, 3-0 Monocryl)