ROBOTICS: An Excellent Match for Rectal Surgery

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While robotic techniques have advanced in the last 10 years, using robotics specifically for colorectal surgery is a new modality that only a few institutions in the New York tri-state area offer. The Division of Colorectal Surgery at Beth Israel Medical Center is one of them.

Beth Israel’s colorectal surgeons have kept abreast of the burgeoning field of robotic surgery and have mastered the robot’s use. We find robotics to be beneficial in operating on many colorectal cases, including diverticulitis and inflammatory bowel disease (for more on inflammatory bowel disease, see page 3). Robotic surgery is especially advantageous in the arena of rectal surgery.

In treating rectal cancer, years of studies have shown the importance of a total mesorectal excision (TME), the removal of all the rectal cancer and the mesorectum where the lymph nodes reside. In fact, the Division’s Warren Enker, MD, stressed and proved the importance of this approach in the 1980s. Studies continue to show that TME, coupled with a reconstruction of the rectum, significantly reduces the risk of cancer recurrence while preserving the sphincter and muscles around the anus and avoiding permanent colostomy.

Because of the rectum’s anatomy (the pelvis is narrow and the angles are sharp), TME is difficult to do using minimally invasive techniques. When colorectal surgeons in the past attempted laparoscopic rectal surgeries, a significant rate—30 percent—had to be converted to an open operation. These conversions made the patient vulnerable to a higher risk of infection, complications and recurrence. Survival itself was compromised. Therefore, TME continued to be done with open techniques along with the accompanying big incisions and stress to the body.

Looking for an innovative way to perform TME in a less invasive manner with quicker recovery and less complications, scarring and pain, our surgeons turned to the da Vinci robot that Beth Israel acquired several years ago. The Division’s colorectal surgeons discovered that the flexible instrumentation (especially the endowrist component), complete range of subtle movement and its three-dimension magnification allowed us to perform the gold-standard TME in a minimally invasive manner.

To refer a patient, request a consult or for more information on robotics and colorectal surgery, please call 212.420.3960.

Left panel shows a cross-section of the pelvis and the plane of dissection in a total mesorectal excision. Right panel shows a surgical view of da Vinci endowrist dissecting the rectum from the pelvic fascia.
Benefits of
STAPLED HEMORRHOIDOPEXY
KURT A. MELSTROM, MD
Attending Colorectal Surgeon

An excellent option to painful hemorrhoidectomy is a stapled hemorrhoidopexy also known as Procedure for Prolapse and Hemorrhoids or PPH. This alternative takes skill and practice and not many colorectal surgeons in the region offer it. Luckily for Beth Israel’s patients, the Division of Colorectal Surgery does offer PPH.

There are many conservative measures that are first tried with patients who are suffering from hemorrhoids, including diet modification, stool softeners, sitz baths and, when necessary, outpatient rubber band ligation. In the ligation procedure, the hemorrhoid is tied off at its base with rubber bands, cutting off the blood flow to the hemorrhoid. The hemorrhoid then shrinks, dies and falls off.

When patients do not respond to these first-line measures, colorectal surgeons have for nearly 100 years surgically removed the hemorrhoids in a straightforward hemorrhoidectomy. The procedure almost always works, but, because the colorectal surgeon is cutting down below the dentate line of the anus, patients suffer through a solid month of considerable pain.

Stapled hemorrhoidopexy, a newer alternative to hemorrhoidectomy, was developed within the last 15 years, though it is still not widely available. The colorectal surgeon inserts a circular stapler through the anus, placing the device at a level above the hemorrhoids. The PPH stapler excises a band of the prolapsed anal mucosa membrane by pulling the excess tissue into the stapler. At the same time, the remaining tissue is stapled higher up in the canal.

One advantage of this approach is that it sweeps a broader swath of the hemorrhoidal area helping to avoid recurrence. The most significant benefit, however, is that because the resected area is above the dentate line, patients experience considerably less pain postoperatively, possibly less wound issues and a quicker return to normal activities.

To refer a patient, request a consult or for more information on hemorrhoid treatment, please call 212.420.3960.

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Options for INFLAMMATORY BOWEL DISEASE

JOSEPH E. MARTZ, MD, Chief, Division of Colorectal Surgery, specializes in intestinal surgery and robotic and laparoscopic techniques. He earned his medical degree from New York University School of Medicine. He did his surgery residency at Beth Israel Medical Center and was fellowship-trained in colon and rectal surgery at Lahey Clinic in Massachusetts. Dr. Martz is board-certified in surgery, as well as colon and rectal surgery. 212.420.3960.

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KURT A. MELSTROM, MD, Attending Colorectal Surgeon, specializes in colon and rectal cancer and inflammatory bowel disease. He earned his medical degree from Weill Cornell Medical College. He did his surgery residency at Loyola University Medical Center and was fellowship-trained in colon and rectal surgery at Weill Cornell Medical Center/Memorial Sloan-Kettering Cancer Center. Dr. Melstrom is board-certified in surgery. 212.420.2846.

One form of inflammatory bowel disease (IBD), ulcerative colitis, responds well to surgery, especially the J pouch, which is now accomplished using minimally invasive techniques, including robotics. Minimally invasive techniques also are used to manage complications of Crohn’s disease, another form of IBD.

Ulcerative colitis, the disease that affects the lining of the colon and rectum, creates severe inflammation and ulceration. Over the past 40 years, ileo-anal anastomosis surgery, also known as J pouch, has become the gold standard approach since it removes the colon and rectum without leaving behind a permanent stoma in the abdomen. The colorectal surgeon creates a new rectum out of the small bowel from a portion of the patient’s ileum, which then hooks down to the anus.

While ileo-anal anastomosis surgery has been performed for two decades, performing it with minimally invasive techniques is relatively new. At Beth Israel, colorectal surgeons are expert at creating J pouches laparoscopically through a small incision, leaving patients with just a 5- to 6-cm scar in the pelvis versus a 15- to 30-cm midline incision and scar. In some cases, our colorectal surgeons find it useful to use the da Vinci robot during ileo-anal anastomosis.

Of course, whether done laparoscopically with or without the robot, the patient benefits from all the advantages of minimally invasive surgery, including less recovery time, pain, complications and scarring.

The Division also treats patients with Crohn’s disease, which is now widely believed to be autoimmune in nature. Because the body’s attacks can go deep into the lining of the GI tract and can be pervasive all along the tract, medications typically keep Crohn’s disease under control. Surgery is limited to managing complications.

When surgery is required, strictureplasty is often used to remedy scar tissue that has built up in the intestinal wall from the prolonged inflammation. Making a cut lengthwise along one side of the bowel, pushing the two ends of the cut tissue together, and then suturing the bowel in the opposite direction widens and resolves the stricture. Strictureplasty is also done at Beth Israel using minimally invasive laparoscopic techniques.

To refer a patient, request a consult or for more information on treatment of inflammatory bowel disease, please call 212.420.3960.
The Division of Colorectal Surgery recommends anal pap smears to all patient groups at risk for anal cancer. Such groups include men who have sex with men, patients who are HIV positive, women who have had cervical abnormalities and anyone with a history of genital or anal warts.

If the anal pap smear shows abnormalities, Beth Israel offers high-resolution anoscopy. This procedure allows colorectal surgeons to stain the anal lining with acetic acid and iodine and view the anal canal with an anoscope and a high-resolution colposcope for evidence of anal dysplasia.

If indicated, a biopsy can be obtained at the same time.

Depending on the degree of the abnormality, patients may be watched carefully for more changes with regular anal pap smears being scheduled, or the abnormal tissue may be destroyed using fulguration.

If anal cancer is diagnosed, patients are treated with a comprehensive, multidisciplinary approach.

To refer a patient or request a consult for an anal pap smear or high-resolution anoscopy, please call 212.420.3960.