

# 11<sup>TH</sup> GLOBAL GASTROENTEROLOGISTS MEETING

June 12-13, 2017 Rome, Italy

## Laparoscopic colorectal surgery

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Traditionally, operation on the colon and rectum required a large abdominal and/or pelvic incision, which often required a lengthy recovery. New instrumentation and techniques allow the surgeon to perform the procedure through several small incision, what we now refer to as "minimally invasive", "laparoscopic" or "laparoscopic-assisted" colorectal surgery.

Minimal invasive surgery can be successfully performed for variety of common benign and rectal conditions including diverticulitis, colon polyps, inflammatory bowel disease ( Crohn's Disease and ulcerative Colitis ), rectal prolapse and malignancy. It can be used to remove the entire colon and rectum or just portion, or segment, of the colon. Minimally invasive techniques can be used to create an ostomy. They may be either colostomy or an ileostomy. Also, minimally invasive techniques can be used to reconnect the intestine from a temporary ostomy. There are very few traditional abdominal colon and rectal procedure that cannot be performed in a minimally invasive manner.

Laparoscopic colorectal surgery refers to a technique where surgeon makes several small incision, instead of a single large incision. For most colon and rectal operation, 3 – 5 incisions are needed. Small tubes, called "trocar" are placed through these incision and into abdomen. Carbon dioxide gas is used to inflate the abdomen in order to give the surgeon room to work. This allows to surgeon to use a camera attached to a telescope to watch a magnified view of the inside the abdomen on operating room monitors.

Laparoscopic colorectal surgery is a significantly more challenging operation as it frequently involves often more than one abdominal quadrant, identification and transection of vascular structures, mobilisation and resection of the bowel, retrieval of the surgical specimen and performing an anastomosis. The greater complexity of laparoscopic colectomy has been associated with longer operative times and long learning curve. Ileo-colic resection, segmental colectomy or anterior resection of the rectum for cancer, segmental colectomy for benign disease and rectopexy can perform laparoscopically.

Results are different for each procedure and each patient, some common advantages of minimally invasive colorectal surgery are shorter hospital stay, shorter recovery time, less pain from the incisions, faster return to normal diet, faster return to work or normal activity, better cosmetic healing. Many patients qualify for laparoscopic or minimally invasive surgery. However, some conditions may decrease a patient's eligibility, such as previous abdominal surgery, cancer ( in some situation ), obesity, variations in anatomy or advanced heart, lung, or kidney disease.

In Indonesia laparoscopic colorectal surgery has been frequently used. Especially in my area west Sumatra, 3-5 patients per day underwent laparoscopic appendectomy and 5-7 patients each month with colonic malignancy performed laparoscopic approach such as laparoscopic hemicolectomy, low anterior resection and surgical redundant sigmoid. The choice of therapy affected by many factors. On a few occasions, an operation may be started laparoscopically and subsequently converted to an open operation due to technical factors such as bleeding or inability to clearly see and recognise the area to be operated on.

Since 2011 has been nearly 300 cases of colorectal malignancy that do minimally invasive surgical therapy. At 3 years, the locoregional recurrence rate was 5.0% in the two groups. Disease – free survival rates were 74.8 % in the laparoscopic surgery group and 70.8% in open surgery group. Overall survival rate were 86.7% in the laparoscopic surgery group and 83.6% in the open-surgery group.

## Biography

M Iqbal Rivai is currently working in General Hospital of Dr. M. Djamil Padang, Indonesia. He has worked for more than 10 years in the related field and gained a plethora of knowledge in related field. His international experience includes various programs, contributions to reputed journals and participation in different international conferences in diverse fields of study.

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