Laparoscopic Colorectal guidelines

Definition:

Removal of the whole or part of the colon and rectum, using laparoscopic techniques. These include completely intracorporeal surgery, laparoscopic assisted resection with an extracorporeal component and hand assisted laparoscopic resection.

Introduction:

Laparoscopic surgery of the colon and rectum remains controversial. The three largest randomised trials have shown equivalence of LCS with conventional surgery. Disappointingly, they have not shown major advantages for laparoscopic colorectal surgery (LCRS), and the few advantages are limited to some short-term benefits. In case series and trials from expert centres, these advantages become more significant.

Indications:

Colon cancer
Rectal cancer
Malignant polyp
Benign disease including diverticular disease, slow transit colon
Inflammatory bowel disease

Relative Contra-Indications:

Obesity
Adhesions
Colonic obstruction
Complicated diverticular and inflammatory bowel disease
Active haemorrhage
Rectal cancer (oncological concerns remain; technically difficult)
Total, transverse, splenic flexure colectomy (technically difficult)

Contra-indications:

T4 lesions
Inexperience

Advantages:

Pain
Cosmetic
Return of GI function
Length of stay
Wound problems

Disadvantages:

Learning curve
Equipment
Expense
Theatre time
Reduced resectional experience for trainees

Pre-operative investigations and preperations:

Similar to open surgery.
For small tumours, endoscopic tattooing is required to allow laparoscopic identification. On table endoscopy inflates the colon, hindering laparoscopic views, and should be avoided.
Barium enema may be useful in determining the extent of resection in diverticular disease.

Bowel preparation with large volume agents (eg Golytely) may increase bowel wall oedema. Preparation with 2-3 rectal enemas only, during 4-12 hours pre-op, is increasingly recommended for both LCRS and open surgery.
DVT prophylaxis (mechanical and LMWH)
Antibiotic prophylaxis
Urinary catheter
Physiotherapy and stomaltherapy

HOSPITALISATION:

- **Pre-op admission days:** May need ½ day for physician assessment, stoma marking and stoma counselling, bowel preparation

- **Theatre Requirements:** 1 alternative energy source (eg: harmonic Scalpel, Ligasure)
1 disposable clip applier
Endoluminal GIA/linear cutter stapler x 2-3
ELA/CEEA stapler
Zero and 30-degree lens
Atraumatic graspers for bowel handling.
wound protector
Bean bag for steep head-down position

- **Length of stay (LOS):** 3-7 days (stomaltherapy training may be rate-limiting)

Level of Care: Wide variation and difficult to standardise
Local nursing and anaesthetic factors will be relevant
Uncomplicated LCRS, should not require epidural/ high care/ PCA/physiotherapy

Technical recommendations: Medial to lateral dissection is the widely accepted approach
Identification of ureter
High ligation should be avoided in diverticular dissection
Mobilisation of splenic flexure is not mandatory for every anterior or sigmoid resection (Brennan DJ. Dis colon Rectum 2007)
Distal bowel washout (after mobilisation and preparatory cross clamping/stapling) prior to cross stapling of washed bowel. This minimises the risk of cell implantation.
Right and sigmoid colectomy: Extracorporeal anastomosis is often feasible and saves stapler costs.
Diathermy and clips may be used as a cheaper alternative to a more sophisticated energy source. recommend it as a procedure of choice.

References:
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Date reviewed: July 2010