A four years retrospective analysis of port site and extraction site complication in laparoscopic colorectal resection

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AIMS

Port site complications are an under investigated but important complication of laparoscopic surgery. This retrospective cohort study aimed to investigate what complications occurred and whether any pre-operative factors may be used to predict such complications.

Unique complications occur with laparoscopic access. Major complications include bowel or vascular injury whilst access is established. Minor complications include hernia and wound infection. Overall rate of port site complications following major laparoscopic surgery is around 21/100000 procedures[1,2], with a proportionate rise with increase size of trocar and incision[3,4]. A 2013 Indian paper quoted their port site hernia rate as 1.7% however this included all laparoscopic surgery, not only colorectal resection[5].

METHOD

Four years retrospective data was collected from electronic patient records and theatre lists on; age, gender, length of stay, comorbidities, procedure undertaken, stoma type, port and extraction site complications and mortality for laparoscopic colorectal resections.

Univariate analysis and multivariable logistic regression was performed to assess whether any pre-operative factors can predict port or extraction site complications.

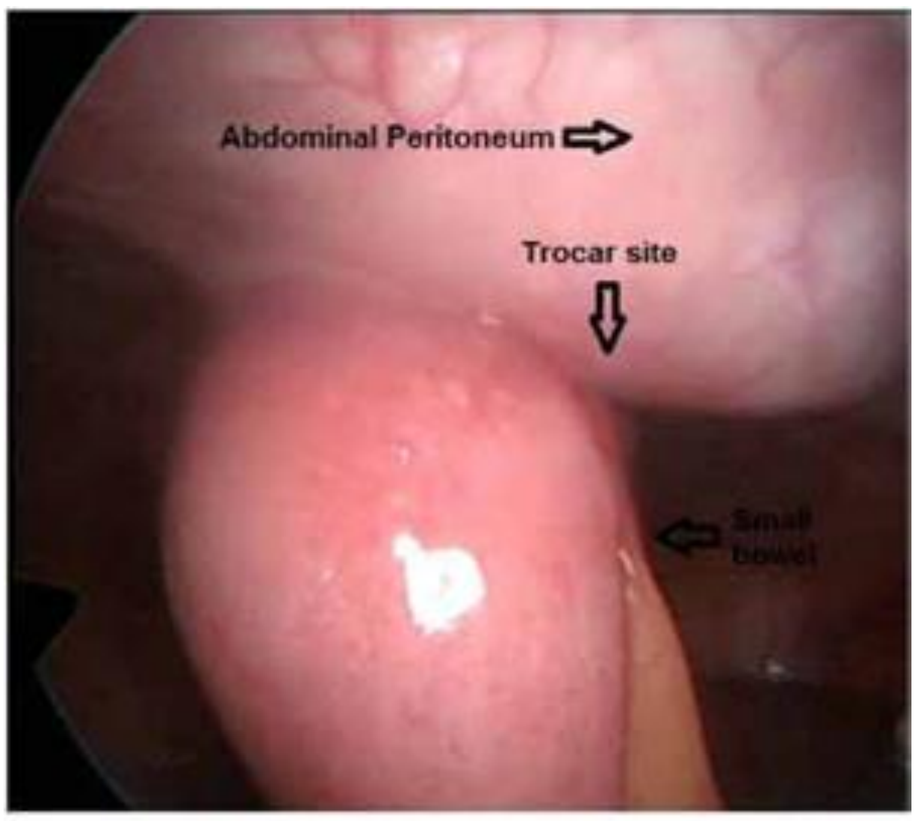

Fig.1: Herniated small bowel through the trocar-site.

RESULTS

Total cases 251 (148 male)	
Age	Median 67 (17-85)
Length of stay	Median 5 days
Resection type (number)	Anterior resection (72)
	Abdominoperineal (8)
	Right hemicolectomy (95)
	Sigmoid colectomy (59)
	Subtotal colectomy (3)
Complication	Port site hernia 11/251 (4.3%)
	Extraction site hernia 11/251 (4.3%)

Note BMI >25 was a significant predictor for development of port site complications (p = 0.002). No other pre-operative factor had an association.

DISCUSSION

Port and extraction site complications were uncommon in our study, occurring in just 22 (8.7%) of laparoscopic colorectal resection cases. High BMI was a statistically significant predictor for occurrence of both port and extraction site complications.

KEY STATEMENTS

- **Our study demonstrates the benefit of the established laparoscopic approach for colorectal resections for patients and hospital in terms of post-operative complication rate and length of stay. When compared to our retrospective unit data on open surgery there is a clear and significant benefit of laparoscopic versus open resection.**

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