Evisceration and other complications of abdominal drains

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Summary: Drainage following major abdominal surgery remains controversial. A case of small bowel evisceration through a Wallis drain site after an abdomino-perineal excision of rectum is reported as a complication of abdominal drainage.

Introduction

Prophylactic drainage following routine abdominal surgery continues to be a controversial subject. The dictum 'when in doubt, drain', from Lawson Tait, is well known to most surgeons. However, as complications can occur with the use of drains, the words of Halsted in 1898 might be more appropriate – 'no drainage at all is better than the ignorant employment of it'.

Case report

A male aged 77 presented with a 1 month history of weight loss and increased frequency of defaecation associated with tenesmus. On examination he was cachectic and had a low rectal tumour. Biopsy confirmed an adenocarcinoma and abdomino-perineal excision of rectum (AP) was performed. A Wallis abdominal drain was brought out through a right iliac fossa stab incision. A separate perineal drain was also employed. The abdominal drain was removed 3 days post-operatively and immediately a loop of small bowel prolapsed through the drain site. General anaesthesia was required to achieve reduction. The patient recovered without further complication.

Discussion

The use of intra-peritoneal drains has evoked considerable discussion. Even advocates disagree about the duration and type of drainage. However, there is evidence that the routine use of a pelvic drain in rectal excisions allows a satisfactory primary wound

healing in 80% of perineal wounds. No improvement is achieved by the addition of suction or irrigation.¹ After open drainage and packing of perineal wounds 35–50% are healed by 3 months. Recently Smith *et al.*² described a method of retrocolic omentoplasty without drainage in abdomino-perineal resections and reported that 75% of perineal wounds healed by 2 weeks and 100% by 4 weeks. With other abdominal surgical procedures, it has been suggested that drainage of the peritoneal cavity is 'physically and physiologically impossible'³ because of adhesion formation between loops of small intestine with encapsulation of the drain. Others have claimed that drains may be detrimental. Lennox⁴ argues that drains do not fulfil their anticipated function and that the peritoneal cavity has enough absorptive capacity for any accumulating fluids, including blood, pus or inflammatory exudate. He also suggests that formation of a tract to an anastomosis needs prolonged drainage beyond 3 days.

However, experimental evidence has shown that the longer the drainage period the higher the complication rate with increased incidence of fistulae and intestinal obstruction or erosion into adjacent structures with peritonitis.⁵

Other complications include drain site sepsis, bleeding from abdominal wall vessels, kinking and knotting of drains, which may require operative removal, and, more rarely, incisional herniae which may in turn result in intestinal obstruction and small bowel incarceration.⁶ This case describes evisceration of small bowel as another complication of surgical drains. Previously, 4 other cases of small bowel evisceration have been reported with only 1 patient surviving a second laparotomy and small bowel resection.^{6–8} In these patients, predisposing factors included general debility, steroid administration and increased intra-abdominal pressure. Furthermore, all had stab incisions for drains which had external diameters of more than 1 cm. Perhaps the

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risk of this complication would be minimized by the use of smaller bore drainage systems. If a stab incision is to be made, it should be made obliquely

and not reach the peritoneum so that the latter is stretched as the drain is inserted.

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