Antegrade Colonic Lavage in the Management of Acute Colonic Obstruction

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ABSTRACT

Conventional management of acute left sided colonic obstruction employs some form of proximal colostomy. Intraoperative antegrade colonic irrigation relieves proximal faecal loading and may permit safer primary resection and anastomosis. The results of a pilot study are presented, and are shown to be favourable.

KEY WORDS

Colon, acute obstruction, bowel preparation, anastomosis.

INTRODUCTION

Conventional management of patients presenting with acute obstructing colonic lesions using a preliminary transverse colostomy, followed by resection and subsequent colostomy closure, evolved because of the danger associated with primary anastomosis in the presence of distended bowel (1). The gross proximal faecal loading, bacterial overgrowth and perhaps decreased blood supply to distended colon have all been implicated as factors contributing to subsequent anastomotic failure (2).

Staged operations however, may lead to an increased mortality in the elderly and many patients are considered unfit for second or third procedures and are left with permanent colostomies (3,4). In a recent survey in Bristol 16% of colostomy closures resulted in faecal leakage emphasising the potential problems associated with staged procedures (5).

In order to avoid these problems Dudley, Radcliffe and McGeehan modified a technique of on-table colonic lavage originally described by Muir in 1968 (6,7). This technique facilitated primary anastomosis in acute left sided colonic obstruction. We have recently employed this technique in a pilot study of primary anastomosis for acute large bowel obstruction in Southmead Hospital, Bristol.

RESULTS

There were six females and four males in this pilot study. The age range was 52-82 years with a median of 76 years. Table 1 shows the aetiology of the acute obstruction.

No patient suffered from a clinical apparent anastomotic leakage. Two patients suffered minor post-operative wound infections. Although no firm data was available, it was the impression of the operating surgeons that the length of postoperative ileus was protracted compared to that seen following elective colonic resection. In one patient the first bowel action did not occur until the eleventh post-operative day.

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TABLE 1

| Aetiology of acute colonic obstruction | Numbers of patients |
|---------------------------------------|---------------------|
| Obstructing carcinoma                  | 4                   |
| (sigmoid or rectum)                    |                     |
| (1A, 1B, 2C)                           |                     |
| Diverticular disease                   | 4                   |
| Sigmoid volvulus                       | 2                   |
| **Total**                              | **10**              |

**DISCUSSION**

Although resection and primary anastomosis for acute colonic obstruction is generally considered hazardous, several workers have reported favourable results. The overall incidence of anastomotic leakage varies between 0–12% for elective colonic resection, but emergency resection is associated with an increased risk of anastomotic failure (2,8). However, using assiduous emptying of the large bowel, though not antegrade lavage, White and Macfie recently reported a 10% anastomotic leak rate following primary anastomosis in acutely obstructed left colon (9).

The detrimental effects of faecal loading on anastomotic healing are well recognised and the need for mechanical bowel preparations in elective colonic surgery is widely accepted. In this present small series we have been favourably impressed by the efficacy of antegrade lavage for on-table bowel preparation. Several minor problems have become apparent. Sterilisation of the scavenger tubing can only be achieved by soaking in Cidex which should be washed off before use. The risk of faecal spillage and subsequent wound contamination can be reduced by adopting a closed system of drainage, emptying the scavenger tubing into a plastic bag – this also relieves the malodorous aroma!

The technique of on-table lavage allows a one-staged procedure to be performed, and this avoids the surgical and social complications of colostomy which haunt many elderly patients. Although the duration of operating time is often longer than that of a comparable elective procedure, this must be balanced against the combined duration of a two or three staged operation. The length of stay in this series is certainly shorter than that required for conventional staged management.

The philosophy of proximal colostomy with or without immediate resection for acute left sided obstructed must now be questioned. Both antegrade lavage or extended right hemicolectomy with ileo-sigmoid anastomosis are effective one staged procedures which avoid all the problems of colostomy (6, 10). In the present series temporary caecostomy was employed in 40% of patients but this appears to be unnecessary, indeed a persistent faecal discharge has complicated one case, and it’s only advantage is for the assessment of anastomotic integrity by post-operative antegrade contrast enema.

Perhaps the time is ripe for a more widespread clinical assessment of intra-operative lavage or sub-total colectomy in the management of acute left side colonic obstruction.

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