

Which surgeons avoid a stoma in treating left-sided colonic obstruction? Results of a postal questionnaire

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Key words: Survey; Colon; Intestinal obstruction

There is now good evidence to indicate that the majority of patients with large bowel obstruction can be safely managed by resection and immediate anastomosis, but have surgeons embraced this policy? A postal survey has been performed to ascertain the opinions of consultant general surgeons within the Wessex region regarding the management of left-sided large bowel obstruction. Of 47 questionnaires sent, 42 replies could be analysed. In patients of good anaesthetic risk, 90% would perform resection with primary anastomosis if the lesion was at the splenic flexure, and 62% would adopt this policy for a rectosigmoid obstruction. In patients of higher anaesthetic risk these figures fell to 71% and 31%, respectively. Surgeons with a gastrointestinal interest were more likely to recommend resection with primary anastomosis. However, this trend reached statistical significance only for splenic flexure and descending colon lesions in good-risk patients. Most surgeons would avoid a stoma in the presence of liver metastases, and only three would be more likely to create a stoma in this situation.

Although large bowel obstruction may be secondary to benign pathology such as diverticular disease or volvulus, in nearly 90% of cases the underlying disease is colorectal carcinoma (1,2). Between 8% and 23% of colorectal carcinomas present with obstruction (3,4). In about two-thirds of these cases the obstructing lesion is situated at the splenic flexure or beyond. Thus, left-sided large bowel obstruction is a significant surgical problem.

Convention dictates that intra-abdominal anastomosis should be avoided in patients presenting with left-sided large bowel obstruction. The preferred operations are defunctioning colostomy which can be performed with a mortality rate of only 4% to 12% (1,3,5,6) or primary resection with colostomy, which in a recent review of

seven series had a mortality rate of 9% (7). However, these low mortality figures tend to exaggerate the attraction of these approaches. Firstly, the mortality and morbidity of the further interventions that these options necessarily imply must also be considered and may increase the mortality rate by 20% (4,5,8-11). Secondly, both staged resection and resection with delayed anastomosis burden the patient with a stoma, which is liable to complications in the form of prolapse, retraction and necrosis (4,8,12). Finally, since these patients have a poor prognosis (13-15), it is important to optimise their quality of life. Of those patients who embark on a course of staged resection or having resection with delayed anastomosis, between one-third and two-thirds will die with their stoma *in situ* (1,3,8,14,16-18).

Recent literature has encouraged the use of resection with immediate anastomosis in the management of large bowel obstruction. This can be accomplished in two ways. The first has been to extend the convention of resection and anastomosis of right-sided lesions (13) to the left colon with the performance of a subtotal colectomy (19,20). Included in the former experience (19) was a review of 200 cases of the use of subtotal colectomy for obstruction from 11 series with a combined mortality rate of 8% and a major morbidity rate of 8%, including a 3% incidence of anastomotic dehiscence. The alternative strategy is segmental resection of left-sided lesions with immediate anastomosis, which can be preceded by antegrade lavage (2,7,21-23), decompression and extrusion of solid faeces (24-28) or no particular clearance of faecal matter (29). These 11 series reporting the results of primary resection with immediate colocolic anastomosis include 291 patients with an overall mortality rate of only 7.1% and an anastomotic leakage rate of under 10%.

Despite the evidence that has accumulated to indicate the superiority of one-stage treatment for left-sided large bowel obstruction, a more conservative approach is still

prevalent (30). A postal survey has been performed to ascertain the opinions of consultant surgeons within the Wessex region.

Method

A questionnaire was sent to all consultant general surgeons in Wessex. The consultants were asked to enter their area of special interest, and the year in which they obtained final FRCS was found by reference to the *Medical Directory*. They were then asked to illustrate their management policy by indicating how they would treat patients of both good and poor anaesthetic risks with obstructions at various levels (splenic flexure, descending colon, sigmoid colon and rectosigmoid junction). They were asked to assume that in all cases, the patient was resuscitated as completely as possible, the primary tumour was resectable and that there was no perforation.

The treatment options were:

- 1 Defunctioning colostomy, subsequent tumour resection.
- 2 Primary tumour resection, colostomy and delayed anastomosis.
- 3 Subtotal colectomy and ileocolic anastomosis.
- 4 Colonic washout, segmental colectomy and primary anastomosis.
- 5 Segmental colectomy and primary anastomosis with-out washout.
- 6 As in (4) with a proximal defunctioning colostomy.
- 7 As in (5) with a proximal defunctioning colostomy.
- 8 Refer to another consultant with a special colonic interest.
- 9 Other (please specify).

They were then asked if the presence of liver metastases would influence their proposed treatment and if so how.

Results

Of 47 questionnaires sent, replies were received from all but two surgeons. An interest in gastrointestinal surgery

was expressed by 20 surgeons. Of the remaining 25 surgeons, two felt that they treated an insufficient number of patients with obstruction to complete the form, one surgeon saw too few splenic flexure and descending colon lesions to offer any opinion on the treatment of these, but completed the rest of the questionnaire and another indicated that in each situation any one of the treatment options could be applied. With the exception of this last surgeon, none would consider referral of the patient to another specialist.

The responses are shown in Table I (good anaesthetic risk) and Table II (poor anaesthetic risk). It is apparent that for the good-risk patients the majority of surgeons (over 60%) consider resection with primary anastomosis to be optimal therapy. This would be accomplished by a subtotal colectomy for the more proximal lesions, but increasingly by segmental colectomy as the lesion was placed more distally. Surgeons were more inclined to opt for resection with delayed anastomosis for these distal lesions. About two-thirds of surgeons performing resection with primary anastomosis perform a colonic wash-out, but relatively few would defunction the anastomosis. In the poor-risk patients, the majority (up to 70%) recommended either simple defunctioning or resection with delayed anastomosis for distal lesions. However, a sizeable minority would advise primary anastomosis in this situation, particularly for more proximal lesions, with one-half recommending a subtotal colectomy for splenic flexure obstructions.

Surgeons who expressed a gastrointestinal interest were more likely to recommend resection with primary anastomosis for obstructions at all levels and in both good- and poor-risk patients (Table III), with the exception of rectal lesions in poor-risk patients. The year in which the surgeons obtained their final FRCS had very little influence on the treatment that they thought optimal (data not shown).

Twenty-six consultants indicated that the presence of liver metastases would not alter their management of the primary tumour. Eleven surgeons stated that, if possible, they would attempt to avoid a stoma if there were liver secondaries. Seven would perform a less radical operation in these circumstances; this included four who

Table I. The treatment options advised by surgeons for patients of good anaesthetic risk

<i>Treatment option</i>	<i>Site of obstruction</i>			
	<i>Splenic</i>	<i>Descending</i>	<i>Sigmoid</i>	<i>Rectosigmoid</i>
Defunction	1	1	1	2
Resect + delayed anastomosis	3	6	10	14
Subtotal colectomy	24	15	2	—
Primary anastomosis with washout				
No defunction	7	12	19	16
Defunctioned	1	1	1	2
Primary anastomosis				
No defunction	4	5	7	6
Defunctioned	1	1	2	2

Table II. The treatment options advised by surgeons for patients of poor anaesthetic risk

Treatment option	Site of obstruction			
	Splenic	Descending	Sigmoid	Rectosigmoid
Defunction	5	6	4	7
Resect + delayed anastomosis	7	12	20	22
Subtotal colectomy	21	10	1	—
Primary anastomosis with washout				
No defunction	3	5	8	5
Defunctioned	1	1	1	1
Primary anastomosis without washout				
No defunction	4	6	6	4
Defunctioned	—	1	2	3

Table III. Comparison between treatments advised by surgeons with a gastrointestinal interest and others, percentage of each recommending resection with primary anastomosis

	Site of obstruction			
	Splenic	Descending	Sigmoid	Rectosigmoid
<i>Good anaesthetic risk</i>				
Gastrointestinal	100*	95*	85	70
Other	81*	72*	67	54
<i>Poor anaesthetic risk</i>				
Gastrointestinal	80	65	50	30
Other	62	48	37	32

* Significant difference between gastrointestinal and other surgeons ($P < 0.05$, χ^2 test)

would perform a less radical resection, two who would elect for simple defunctioning and one who would perform a Hartmann's resection if metastases were extensive.

Discussion

This survey has indicated that the majority of surgeons in Wessex would now advocate excision of left-sided obstructing lesions with primary anastomosis in patients of good anaesthetic risk. For the less fit patients, most would retain this policy for splenic flexure and descending colon lesions, but perform Hartmann's resection for obstructing tumour placed more distally. Subtotal colectomy was preferred for proximal lesions and segmental colectomy for those of the sigmoid and rectosigmoid. Of those surgeons recommending segmental colectomy, about two-thirds still use an on-table colonic lavage. A minority of these surgeons advocate the use of proximal decompression to protect the anastomosis, although this may not reduce the incidence or the consequences of anastomotic leakage (4,12,24).

Surgeons with an expressed gastrointestinal interest tended to be more likely to treat their patients with resection and anastomosis. However, referral of these patients to a gastrointestinal specialist was an infrequently used option. Referral to a specialist would be expected to reduce further the incidence of stoma formation in patients presenting with obstruction.

Given the high proportion of patients who never complete a staged programme of treatment, it is clear that quality of life is optimised by resection and primary anastomosis. It has been calculated that the permanent colostomy rate in these patients can be reduced from about 40% to 12% by the adoption of this policy (7,19). It is, therefore, particularly appropriate that the majority of the surgeons surveyed would avoid a stoma in the presence of secondaries, while only three would be more likely to create a stoma in this situation.

The data available in the literature indicate that resection with primary anastomosis has a number of advantages over more conventional therapy. Firstly, it can be performed at least as safely as staged procedures, and indeed the overall mortality rate of the latter may be higher in those patients progressing to restoration of bowel continuity. Secondly, the techniques of immediate

anastomosis allow many patients to avoid the inconvenience of a stoma, which is never reversed in a high proportion of those embarking on staged treatment protocols. Finally, the duration of hospital stay is reduced by primary resection. In a prospective multi-centre study the overall mean stay was 40 days for staged resection, and 20 days for primary resection (13). Hospital stay after resection and immediate anastomosis has been reported as low as a mean of 7 days (23), and in many other series patients are, on average, discharged within 2 weeks (7,22,25). The only potential difficulty with resection and anastomosis is that the results of this more complex surgery may be less satisfactory in the hands of trainees than consultants (10,13), although this has been refuted by others (19,24,25), and should not in either case be allowed to influence management.

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Received 13 February 1992