

Emergency Laparotomy for Acute Sigmoid Volvulus in El Obeid Hospital, Western Sudan

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Abstract:

Objectives: To evaluate the role of emergency laparotomy in patients presenting with acute sigmoid volvulus at El Obeid Teaching Hospital, Western Sudan.

Patients and Methods: The records of 22 patients with acute sigmoid volvulus who were offered emergency laparotomy and admitted to the wards of the University Surgical Unit at El Obeid Teaching Hospital, Western Sudan over 4 years, were studied.

Results: They were 18 males and four females. The mean age (\pm SD) was 59.7 (\pm 14.16) years. Patients had viable bowel for which detortion, deflation and colopexy were done. Eight patients had sigmoid colectomy later. Six patients had gangrenous bowel and underwent immediate resection and anastomosis, following which one patient died (4.5%). Eight patients were lost in follow up.

Conclusions: Emergency laparotomy for sigmoid volvulus may be overdone. A conservative decompression sigmoidoscopy with derotation and tube deflation should be tried in such patients, with plans for colectomy later.

Key words: Emergency laparotomy, sigmoid colon volvulus.

Introduction

Volvulus of the sigmoid colon is an old disease documented in the Ancient Egyptian, Greek and Roman writings¹. It is the commonest cause of large gut obstruction in many regions of the world², and extremely common in developing African countries; especially in elderly males. It is associated with considerable morbidity and mortality³. Sigmoid volvulus represents 16.7% of obstructed bowel in Khartoum⁴ and 11.6% of the cases of intestinal obstruction in El Obeid Teaching Hospital, Western Sudan.

Patients presenting early could be managed with rectal tube, sigmoidoscopy and planned for resection of the redundant colon at a later stage. Late presenting patients require emergency surgical intervention, which may dictate bowel resection with or without primary anastomosis.

In this communication we report our local experience in El Obeid teaching Hospital, Western Sudan regarding patients with acute sigmoid volvulus who underwent emergency laparotomy.

Patients and Methods

Twenty two patients with acute sigmoid volvulus presenting with acute abdomen to the University Surgical Unit in El Obeid Teaching Hospital, Western Sudan; from Jan 2002 through Jan 2006; were offered emergency laparotomies. The indications for emergency operation were summarized in table 1.

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Table 1:

1. Fever.
2. Leucocytosis.
3. Shock.
4. Continuous abdominal pain.
5. Tenderness / rebound tenderness.
6. Abdominal rigidity / guarding.
7. Peritonitis.

In a surgical audit, the hospital records of those patients were retrospectively studied. The data were analyzed for age, sex, residence, the operative findings, the definitive treatment offered and the post operative outcomes.

Results

There were 18 males and four females. The age ranged from 30–80 years with the mean age (\pm S.D) 59.70 years (\pm 14). All patients were from rural areas. At laparotomy the bowel was found viable in 16 (72.7%) patients where untwisting, deflation and fixation was performed. patients reported later for elective resection. 3 patients were re-admitted with recurrence before their scheduled elective surgery and were then offered immediate resection and anastomosis . 8 patients were lost at follow up.

In 6(27.3%) patients the bowel was gangrenous. Emergency resection and anastomosis was done. One patient (4.5%) out of this group died shortly in the post-operative period.

Discussion

Acute sigmoid volvulus is a strangulating form of intestinal obstruction¹. Late cases may proceed to ischaemia, gangrene, perforation and peritonitis with fatal septicaemia². In this series

the mean age of patients was 59.7 years, which is comparable with international^{6,7} and national studies⁸. All patients were farmers and nomadic herd citizens from rural villages with peculiar life style and traditional food habits. They eat high fibre diets usually a single large and bulky meal. Taha⁸ hypothesized that such feeding habits result in long hypertrophied colon predisposing to sigmoid volvulus. The male: female ratio was 4.5:1. Male predominance was also mentioned before ranging from 3.3:1⁹ to 13.5:1¹⁰. That was probably because ladies enjoy more regular meals and bowel habits.

In this study 22 patients were offered emergency laparotomy. The operative findings showed viable bowel in 16 (72.7%) patients. Detortion, deflation and fixation were done. Although this procedure may be justifiable for patients with critical general condition on presentation, many of such patients believe they were cured and could hardly be convinced to undergo elective second surgery in the future; and it may be for that reason 8 patients were lost at follow up. However, another five patients were re-admitted for elective resection and anastomosis, where as three patients had recurrences before their scheduled appointments. For this reason urgent colectomies were performed. In a similar study Bhuiyan et al found 63.5% of the patients subjected to emergency laparotomy had viable bowel¹¹.

The percentage of viable bowel in this series may indicate that other minor conservative procedures like endoscopic detortion with rigid or flexible sigmoidoscope and a rectal tube could have been sufficient as emergency treatment for those patients. That also saves the hazards of emergency laparotomies.

Madiba reported that decompression with sigmoidoscopy and rectal tube was successful in 70-90% of his cases³. Bak reported a success rate of 91% in none operative deflation of sigmoid volvulus¹². Dulgar found sigmoidoscopy and rectal tube application initially was effective in most cases of volvulus of the sigmoid colon¹³. Grossmann reported 81% success rate¹⁴, and Theuer stated that decompression can be safely performed on successive decompressions¹⁵. The risk of instrumental perforation of gangrenous bowel can be looked after with close clinical evaluation of patients after the procedure.

Visualization of devitalized bowel mucosa on endoscopy, blood stained effluent and signs of peritonitis may indicate ischaemia³.

Conclusion

This study showed that many of the patients with acute sigmoid volvulus were offered emergency laparotomy probably unnecessarily. Conservative decompression sigmoidoscopy with derotation and tube deflation should be tried in such patients. Delayed urgent resection may be done when the patient is in optimal condition with preoperatively prepared bowel.

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