



A study on sigmoid volvulus admitted in JLNMC, Bhagalpur

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ABSTRACT

It is the twist (rotation) in the axis of the loop of the bowel either clockwise or anticlockwise. 15% of large bowel obstruction is due to volvulus. Sigmoid colon is the commonest site (anticlockwise)—65%. This study was done to evaluate the clinical features, type of surgical procedures performed, and to determine the prognosis of sigmoid volvulus. Materials and Method: In this study, 50 cases of sigmoid volvulus were taken with any age. Study was done in surgery department of JLNMC, Bhagalpur, Bihar from April 2016 to March 2017. All cases were registered fulfilled the inclusion criteria and exclusion criteria. Age, sex, symptoms, duration, types of surgery performed, postoperative complications, mortality, duration of hospital stay were analysed. Results- Out of 50 patients 35(70%) were male and 15(30%) were females. The average age group of presentation was 46years. The most common presenting complaint was abdominal distension and not passing stool and flatus. Colostomy was the most commonly done operation in 38(76%) cases. The average duration of the operation was about one and half hours. Wound infection was the most common post operative complication in 33(66%) cases. Average number of days hospital stay was 20 days. Mortality was noted in 12(24%) cases. Conclusion- It is an emergency condition and should be operated as soon as possible to prevent the bowel to get ischemic. It usually presents in old people. Colostomy is the choice of operation. If treated properly, we can reduce the mortality due to this condition.

KEYWORDS : Sigmoid volvulus, colostomy, abdominal distension, wound infection.

Introduction

Sigmoid volvulus is common in Asia, common in India (7% of intestinal obstruction) and especially South India because of high fibre diet. It is very common cause of large bowel obstruction in Peru and Bolivia due to high altitude. More common in males and old age. It is common in patients with chronic constipation with laxative abuse. It is common in: Ogilvie's syndrome, Mentally retarded individuals, Chaga's disease, Hypothyroidism, Anticholinergic drugs, Multiple sclerosis, Scleroderma Parkinson's disease. Clinical Features includes Pain in the abdomen—initially left sided, eventually all over, absolute constipation (obstipation—no faeces, no flatus), enormous distension of abdomen, starting from left iliac fossa extending to the whole of the abdomen (Tympanic abdomen), late vomiting and eventually dehydration. features of peritonitis, hiccough and retching can occur. Tyre like feel of the abdomen is diagnostic. Sigmoid volvulus, the wrapping of the sigmoid colon around its mesentery, is an unusual but important intestinal obstruction form (1-3). Although the disease was described by von Rokitsansky in 1836 (4), there have been controversies as to its treatment, and its prognosis is still grave (1-8). On the other hand, interestingly, to date no classification has been made for it. It is frequently reported in volvulus belt including Middle and South Africa, Turkey, and Indian subcontinent. The management of sigmoid volvulus has evolved over the years from simple detortion either by endoscopic means or open surgery through colostomy related procedure, and now one-stage resectional surgery. Even though endoscopic detortion is a useful initial management in the absence of gangrene or peritonitis, resection of the redundant sigmoid colon remains the definitive treatment. Colostomy is the better done at the time of operation and later anastomosis performed. Delay in diagnosis and treatment may lead to sigmoid ischemia, infarction, peritonitis, and septicemia, resulting in mortality of up to 60%. In most instances, decompression can be done nonoperatively with insertion of a rectal tube, or performing flexible sigmoidoscopy. However, sigmoidoscopy should not be performed in patients who have developed clinical evidence of bowel gangrene (such as those with sepsis, fever, or peritonitis).

Materials and Method

In this study, 50 cases of sigmoid volvulus were taken with any age.

Study was done in surgery department of JLNMC, Bhagalpur, Bihar from April 2016 to March 2017. All cases were registered fulfilled the inclusion criteria and exclusion criteria. Age, sex, symptoms, duration, types of surgery performed, postoperative complications, mortality, duration of hospital stay were analysed. Diagnosis was made on plane X-ray showing grossly distended sigmoid colon with multiple air fluid level, and "coffee bean sign" was found in patients. Barium study was done in eight patients, and nine patients underwent CT scan of abdomen, in which "whirlpool sign" was found.

Inclusion Criteria -All the patients who came to emergency with sigmoid volvulus. Exclusion Criteria All cases of large bowel obstruction other than due to sigmoid volvulus were excluded.

RESULTS

1. Out of 50 patients 35(70%) were male and 15(30%) were females.

Number of males	Number of females	Total cases
35	15	50

2. The average age group of presentation was 46years.

Age group of patients	Numbers
10-20	2
21-30	3
31-40	10
41-50	25
51-60	2
61-70	3

3. The most common presenting complaint was abdominal distension and not passing stool and flatus.

Presenting complaints	Number of patients
Distension of the abdomen	50 (100%)
Constipation	45(90%)
Pain abdomen	40(80%)
Vomiting	35(70%)

4. Colostomy was the most commonly done operation in 38(76%) cases.

Type of operation performed	Number of cases
Colostomy	40 (80%)
Primary resection and anastomosis	10(20%)

5. Wound infection was the most common post operative complication in 33(66%) cases.

Postoperative complications	Number of cases
Wound infection	30(60%)
Skin excoriation	10(20%)
Anastomotic leak	5(10%)
Electrolyte imbalance	10(20%)
Septicemia	5(10%)

The average duration of the operation was about one and half hours. Average number of days hospital stay was 20 days. Mortality was noted in 12(24%) cases. It is an emergency condition and should be operated as soon as possible to prevent the bowel to get ischemic. It usually presents in old people.

Discussion

In this study on sigmoid volvulus, we have evaluated the clinical features, type of surgical procedures performed, and to determine the prognosis of sigmoid volvulus. Main symptoms of Sigmoid volvulus in the majority of cases were abdominal distension, pain and constipation. Majority of patients (90%) are present with classical features of intestinal obstruction such as distention of abdomen, vomiting, constipation, and abdominal pain with signs of abnormal bowel sound, tympany, palpable mass in abdomen, empty rectum, and dehydration. These signs and symptoms of our patients were similar to those described in literature. Diagnosis of this condition was made based on typical clinical findings and X-ray findings. In 1980, Osime reviewed 13 cases managed over a five-year period in this centre. Most cases were managed by resection of the redundant sigmoid colon. However colon, the choice of procedure was either a Paul Miculicz exteriorisation resection or a Hartmann's procedure. These required a readmission for a second stage surgery to restore bowel continuity. Furthermore, after reviewing 39 of 57 patients from New Zealand who ultimately had surgery over a 20 year period, Yassaie, Thompson Fawcett and Rossaak suggested that early elective surgery for sigmoid volvulus was encouraged when prohibitive comorbidities were not present. After reviewing 39 of 57 patients who ultimately had surgery over a 20 year period (January 1989 – January 2009), early elective surgery was encouraged in patients without prohibitive co-morbidities. Mnguni et. al, reported that SV predominately affected young African males and found that the timing of surgery, the type of anastomosis and the viability of the bowel did not influence surgical outcomes in 135 patients (122 males; with a mean age of 39.3 years; SD \pm 17 years). Complications and mortality occurred in 14% and 17% of the study patients, respectively. Tan, Chong and Sim [7] who studied 71 patients in a Singapore hospital over approximately nine years reported that 90.1% of SV patients were initially treated conservatively using a flatus tube and/or sigmoidoscopic decompression. Emergency surgery was associated with a mortality rate of 17.6%. So, elective surgery was suggested in view of the high recurrence rate (>60%) and the considerable risks of emergency surgery. Although Finsterer had earlier advocated primary resection and anastomosis, it did not gain popular support because of the fear of anastomotic failure and wound infection following surgery in the unprepared bowel. However, evidence supporting this fear is lacking. In fact there are studies demonstrating increased risk of wound infection in patients who received bowel preparation. Thus, routine bowel preparation is increasingly being questioned. There is therefore a growing interest in primary resection and anastomosis for obstructive lesions of the colon in the emergency setting. Few studies in West Africa have been carried out to evaluate the place of this change in our practice. Sule et al in 1999 reported a favourable outcome with one-stage resection after on-the-table colonic lavage. However, on-the-table lavage is a time-consuming procedure with the potential of increasing risk from prolonged exposure to anaesthesia. Traore and colleagues conducted a retrospective study (1996-2010) of 417 patients in

Bamako, Mal and found that the surgical approach had an impact on the mortality of patients who were in poor general condition. Onder et al studied 158 adults [135 men (85.4%) and 23 women (14.8%) with an overall mean age of 62.54 years.

Conclusion

Sigmoid volvulus is an emergency condition and should be operated as soon as possible to prevent the bowel to get ischemic. It usually presents in old people. Colostomy is the choice of operation. If treated properly, we can reduce the mortality due to this condition. Early diagnosis is essential to its success.

References

- Yassaie O, Thompson-Fawcett M, Rossaak J (2013) Management of sigmoid volvulus: is early surgery justifiable? ANZ J Surg (83: 74-78)
- Traore D, Sanpgo ZZ, Bengaly B, Coulibaly B, Traore I, Goita D, et al. (2014) Acute sigmoid volvulus: results of surgical treatment in the teaching hospitals. J Visc Surg (151:97-101)
- Onder A, Kapan M, Arikanoglu Z, Palanci Y, Gumus M, et al. (2013) Sigmoid colon torsion: mortality and relevant risk factors. Eur Rev Med Pharmacol Sci (2013) 17 Suppl 1: 127-132)
- Ahsan I, Rahman H. Volvulus of the sigmoid colon among Pathans. British Medical Journal (1967;1(5531):29-30)
- Andersen DA. Volvulus in Western India: a clinical study of 40 cases, with particular reference to the conservative treatment of pelvic colon volvulus. British Journal of Surgery (1956;44:132-43)
- Mnguni, MN, Islam, J, Manzani, V, Govindasamy V, Zulu BM, et al. (2012) How far has the pendulum swung in the surgical management of sigmoid volvulus? Experience from the KwaZulu-Natal teaching hospitals and review of the literature. Colorectal Disease (14: 1531-1537)
- Tan KK, Chong CS, Sim R (2010) Management acute sigmoid volvulus: an institutions' experience over 9 years. World J Surg (34: 1943-1948)
- Mortensen NJ, Jones O. The small and large intestines. In: Russell RCG, Williams NS, Bulstrode CJK (Eds.). Bailey and Love's Short Practice of Surgery, 24th edn. London: Arnold, 2004. pp. (1153-85)
- Ballantyne GH. Review of sigmoid volvulus: history and results of treatment. Dis Colon Rectum (1982;25(5):494-501)
- Mahmoud N, Rombeau JL, Ross HM, Fry RD. Colon and rectum. In: Townsend CM, Beauchamp RD, Evers BM, Mattox KL (Eds.) Sabiston Textbook of Surgery, 17th edn. Philadelphia, PA: Saunders, 2004.
- Reilly PMJ, Jones B, Bulkley GB. Volvulus of the colon. In: Cameron JL (Ed.). Current Surgical Therapy. St Louis, MO: Decker Inc, (1992, pp. 170-4)
- Burrell HC, Baker DM, Wardrop P, Evans AJ. Significant plain film findings in sigmoid volvulus. Clin Radiol (1994;49(5):317-9)
- Maddah G, Kazemzadeh GH, Abdollahi A, Bahar MM, Tavassoli A, Shabahang H. Management of sigmoid volvulus: options and prognosis. J Coll Physicians Surg Pak (2014;24(1):13-7)
- Lal SK, Morgenstern R, Vinjirayer EP, Matin A. Sigmoid volvulus an update. Gastrointest Endosc Clin N Am (2006;16(1):175-87)
- Chalya PL, Mabula JB. Sigmoid volvulus and ileo-sigmoid knotting: a five-year experience at a tertiary care hospital in Tanzania. World J Emerg Surg (2015;10:10)
- Osime OC, Okobia MN and Osime U. The changing pattern of intestinal obstruction. Nig J Surg Sci (2002;12(1):5-8)
- Finsterer H (1912), quoted by U Osime. Volvulus of the sigmoid colon. J R Coll Surg Edinb (1980;25(1):32-37)
- Santos JC, Batista J, Sirimarco MT, Guimaraes AS and Levy CE. Prospective randomised trial of mechanical bowel preparation in patients undergoing elective colorectal surgery. Br J Surg (1994;81(11): 1673-1676)
- Platell C and Hall J. What is the role of mechanical bowel preparation in patients undergoing colorectal surgery? Dis Colon Rectum (1998;41(7): 875-882)
- Sule AZ, Iya P, Obekpa PO, Oghonna B, Momoh JT and Ugwu BT. One stage procedure in the management of acute sigmoid volvulus. J R Coll Surg Edinb (1999;44(6): 164-166)