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SIGMOID VOLVULUS: A CASE REPORT OF THE SURGICAL TREATMENT

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ABSTRACT

Sigmoid volvulus is the third most common cause of intestinal obstruction. Various standard treatment methods have been suggested by many authors, associated with different mortality rates. We report a case of sigmoid volvulus with the simple modification in the standard surgical procedure of primary resection and anastomosis which hastened the recovery in our patient preventing the anastomotic leak.

Keywords: Sigmoid Volvulus, simple modification, primary anastomosis.

INTRODUCTION

Sigmoid volvulus (SV) is the third most common cause of intestinal obstruction in the adults after cancer and diverticulitis¹. It is a pathology commonly seen in elderly and is uncommon in young. Various standard treatment methods are in use, associated with different mortality rates. We report a case of sigmoid volvulus in a middle aged man with a simple modification in the standard surgical procedure.

CASE REPORT

A 45 year old male patient presented to our hospital with complaints of pain and abdominal distension from two days. There was no history of constipation, nausea, vomiting or diarrhea. On examination the abdomen was distended with diffuse tenderness and guarding. There was no rigidity present. Patient was clinically stable with pulse rate of 84/min, BP of 120/70 mm

of Hg. The electrolyte levels showed that Na^+ was 132mEq/L, Cl^- 106mEq/L, HCO_3^- 19mEq/L and were in normal limits with a reduction in the K^+ levels of 3.2mEq/L. Erect X- ray, abdomen showed dilated bowels with the “coffee bean sign” as in fig 1.



Fig 1: X ray showing coffee bean sign of sigmoid volvulus

Ultrasound showed free fluid in hepatorenal fossa with dilated bowel loops and decreased peristalsis. The diagnosis of SV was made. Emergency laparotomy was done which revealed 20 cm long gangrenous dilated bowel loop as in fig 2.



Fig 2: Dilated gangrenous sigmoid colon seen intra operatively

Resection of the gangrenous bowel with end to end anastomosis of the viable colon was performed. Drain was placed in the peritoneal cavity after a thorough wash and abdomen was closed in layers. A soft red rubber catheter placed per rectally above the level of primary anastomosis to drain the retained fecal matter. It was fixed to the peri-anal skin and was retained for 4 days which drained approximately 75-100 ml of fecal matter per day. Patient then recovered with uneventful post operative period.

DISCUSSION

SV is uncommon in USA and Europe but is common in India, Russia, Brazil and Sub Saharan African population¹. The exact

incidence of sigmoid volvulus is not known. It arises due to rotation of the colon around the mesentery which occurs in counter-clockwise direction in 70% of patients. Authors from different parts of the world have reported varying age groups of occurrence of SV with a range of 20-80 years and a peak increase in the incidence after 50 years. Due to its uncommon epidemiology in the young, SV often results in a delayed diagnosis and complications necessitating a timely intervention and management. SV presents with abdominal distention (88%), constipation (73%), nausea and vomiting (27%), and diarrhea (8%) cases². The clinical features may be less diagnostic. Radiological studies assist in the diagnosis. Various treatment modalities have been described by different authors, for non-gangrenous and gangrenous colonic volvulus. Endoscopic decompression is been advised as a promising treatment modality for non-gangrenous SV to lessen the morbidity associated with surgical procedures. Resections with colostomy, resection with primary anastomosis, resection with hartmann's pouch are all standard treatment procedures associated with variable mortality rates. The mortality rate depends primarily on presence or absence of gangrenous segment, associated co-morbid conditions, a prompt surgical timing and correct management. Due to the high rate of recurrence of SV after initial successful non-operative management and the attendant risks of mortality from gangrenous bowel developing with a subsequent volvulus, Larkin et al concludes that all patients should be considered for definitive surgery after initial colonoscopic decompression³. Primary resection and anastomosis is the gold standard treatment for

SV. Suleyman O et al reported that sigmoidectomy with primary anastomosis is a good option for the definitive management of sigmoid volvulus⁴. Sule A Z et al suggest that resection of acute SV and primary anastomosis after decompression alone can be carried out safely in reasonably fit patients⁵.

CONCLUSION

SV is a disease which requires an early diagnosis and accurate management plan to prevent the recurrence and decrease the morbidity of the patient. A judicious utilization of the imaging techniques helps in making an accurate diagnosis. The patient's condition and presence or absence gangrenous segment plays an ultimate role in planning the management of SV. Placing the drain per rectally hastened the recovery in our patient. It decreases the chances of anastomotic leak and failure. It is a simple modification in the standard procedure of resection with primary anastomosis which reduces the chances of failure of anastomosis and hastens the recovery. However a larger study is essential in this aspect to know the prognosis of the patients with varying clinical condition.

Declaration on conflict of interest: Nil

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