COMPOUND VOLVULUS: A CASE REPORT AND LITERATURE REVIEW

Bhawani Khanal\(^1\)*, Rakesh Kumar Gupta\(^2\), Upama Sharma\(^3\) and Vikas Adil\(^4\)

Department of General Surgery, B.P. Koirala Institute of Health Sciences, Dharan, Nepal.

*Corresponding Author: Bhawani Khanal
Department of General Surgery, B.P. Koirala Institute of Health Sciences, Dharan, Nepal.

ABSTRACT

Ileo-sigmoid knot, also known as compound volvulus, is an unusual and rare cause of intestinal obstruction, which involves twisting of the loops of ileum around the base of sigmoid colon or vice versa. We are reporting a case of ileo-sigmoid knot in a 55 year old male who presented in our emergency with features of intestinal obstruction. On exploration after initial resuscitation, gangrenous terminal ileum along with dilated and gangrenous sigmoid colon was found intra-operatively for which sigmoid resection with colo-colic anastomosis and resection of gangrenous ileum with double barrel ileostomy was done.

KEYWORDS: Ileo-sigmoid knot (ISK), volvulus.

INTRODUCTION

Ileo-sigmoid knot, also known as compound volvulus, is unusual and rare cause of intestinal obstruction, which involves twisting of the loops of ileum around the base of sigmoid colon or vice versa. The etiology of ileo-sigmoid knotting is controversial.

This condition rapidly progresses to gangrene of both ileum and sigmoid colon and needs prompt surgery.

CASE REPORT

A 55 year old male was brought to the emergency department with severe abdominal pain, massive abdominal distension and bilious vomiting for 1 day. On examination, he was tachypnoeic and tachycardic with normal blood pressure. Abdomen was distended without visible peristalsis. Abdominal examination revealed diffuse guarding and rebound tenderness without any audible bowel sounds. Investigation revealed leukocytosis (14000/cc) and ABG showed metabolic acidosis. Plain x-ray abdomen supine and erect film showed dilatation of both large bowel and small bowel. With a provisional diagnosis of acute large bowel obstruction, we proceeded for emergency exploratory laparotomy. On exploration, minimal hemorrhagic peritoneal fluid was noted. A gangrenous loop of ileum encircling base of loop of gangrenous sigmoid colon was found. Unknotting of ileo-sigmoid knot was successfully achieved. Redundant sigmoid colon and gangrenous distal segment (50cm) of ileum, 15 cm proximal to ileocecal junction was resected. Colo-colic anastomosis along with double barrel ileostomy was performed. Patient was allowed enteral nutrition on 4\(^{th}\) postoperative day. Post-operative period was uneventful and the patient was discharged on 6\(^{th}\) post-operative day.

Patient was on regular follow-up for 6 weeks. At 6 weeks ileo-cologram was performed to check distal patency following which stoma reversal was done. Entire postoperative period was uneventful, and patient was orally allowed on 3\(^{rd}\) post-operative day and was discharged on 5\(^{th}\) postoperative day. Patient is on regular follow-up and doing well.

Fig 1: X-ray abdomen: Left (supine view): dilated small bowel and large bowel loops, Right (erect view): multiple air-fluid levels in centre as well as periphery of abdomen, suggestive of dilated small and large bowel loops.
ileum proximal to the ileo-caecal junction in most of the cases. Various surgical procedures have been conducted in these patients depending upon the bowel viability. [4]

Prompt resuscitation is very crucial for survival and includes fluid and electrolytes correction, passage of a nasogastric tube, urinary catheterization for urinary output monitoring and antibiotics. [3] Unlike sigmoid volvulus, attempts to deflate the distended colon using a sigmoidoscope or a flatus tube, often fails in ISK. This is because the ileum tightly envelops the base of sigmoid colon, defying any such attempt. [4]

Emergency laparotomy is done as soon as possible. If there is a gangrenous bowel, a single staged procedure of resection and anastomosis may be done or a two-staged procedure of resection and stoma, then stoma reversal at a later date depending on the state of the patient. For nongangrenous bowel, untwisting of the twisted bowel with or without preventing procedures such as sigmoidopexy, mesopexy, mesoplasty or resection and anastomosis. [3,4,5]

The prognosis depends on early presentation, diagnosis and prompt intervention. The mortality rate is 6.8–8% for nongangrenous and 20–100% for gangrenous. Shock is a major cause of death. [3]

**CONCLUSION**

Ileosigmoid knotting also known as double volvulus, compound volvulus, or intestinal knotting is an uncommon cause of intestinal obstruction. Preoperative diagnosis requires high degree of suspicion. Prognosis depends upon timely intervention and extent of gangrene of bowel.

**Conflict of interest:** None.

**REFERENCES**


