



ILEOSIGMOID KNOTTING- A RARE CAUSE OF INTESTINAL OBSTRUCTION

General Surgery

**Dr Md Zeeshan
Anwar**

JR-III

**Dr Radhika
Raman**

Associate Professor

**Dr Rajnish
Chandran**

Assistant Professor

Dr Saima Masood* JR-III *Corresponding Author

ABSTRACT

Background Ileosigmoid knotting, also known as compound volvulus or double volvulus, is a rare cause of intestinal obstruction, that rapidly progresses to gangrene of the ileum as well as the sigmoid colon. **Aim** Preoperative diagnosis is difficult because of its infrequency and atypical radiographic findings. Awareness of the condition is essential for prompt diagnosis and optimal management. This report describes a case in a 35-year-old male and describes the management of this rare condition. **Conclusion** Ileosigmoid knotting is a rare but life threatening cause of closed double loop obstruction. Delay in diagnosis can lead to progression of ischemia and subsequent gangrene of large segment of bowel loops. Prompt recognition on basis of clinical and basic radiological findings with immediate surgical intervention, advanced critical care to avoid disastrous complications of Multi organ failure helps to reduce the mortality.

KEYWORDS

INTRODUCTION

Ileosigmoid knotting (ISK), also known as compound volvulus or double volvulus, is a rare cause of intestinal obstruction, that rapidly progresses to gangrene of the ileum as well as the sigmoid colon. ISK is common in adult males and the peak incidence is in the 3rd–5th decades. ISK is also common in the late pregnancy period in females. The mean mortality rate for ISK is 6.8–8% in nongangrenous and 20–100% in gangrenous cases.

Case Study

A 35-year-old male presented with diffuse abdominal pain and constipation of 12 hour duration. This was associated with progressive abdominal distension and vomiting. The patient reported no history of blunt trauma or previous surgeries.

Clinical Features

On clinical examination, the patient was conscious, oriented with vital signs including pulse 130 bpm, blood pressure 98/70 mmHg, and saturation 99%. A chest examination was unremarkable. Abdomen was distended and tense with signs of peritonitis. Plain film of the abdomen showed dilatation of the small intestine with a gas and air fluid level, with an associated moderately distended, and obstructed sigmoid loop. A CT scan was planned, but could not be carried out for technical reasons. The patient was resuscitated and was taken up for laparotomy 4 hours after admission.

Intra Op Findings

Distal ileum was twisted clockwise around the base of the sigmoid loop. The closed sigmoid loop and the knotted distal ileum were gangrenous. Following a 100-cm resection of gangrenous ileum and sigmoid colon, a double barrel ileostomy and primary anastomosis of colon was carried out.



Ileostomy was functional on 2nd day. Patient was orally allowed on 4th day and drain was removed on 6th day. The patient made an uneventful recovery and was discharged after 10 days. A re-continuation surgery of the bowel was performed two months later. The patient was discharged on the 7th post-operative day of the re-continuation surgery.

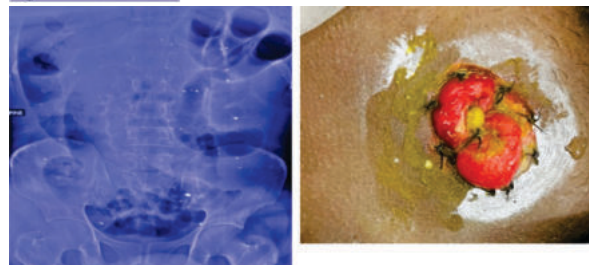
CONCLUSIONS

The pathogenesis of ileosigmoid knot is dependent on three factors: 1) a long small bowel mesentery with free mobile small bowel, 2) a long sigmoid with a narrow pedicle, and 3) a bulky diet with the presence of an empty small bowel.

There are secondary factors besides the anatomical factors mentioned above, such as late pregnancy, trans-mesenteric herniation, Meckel diverticulitis with band, and ileocecal intussusceptions. It is reported that ileosigmoid knot is predominantly seen in certain African, Asian, and Middle-East nations and rarely in white populations. Ileosigmoid knot is classified into three types.

Type I	The ileum (active component) wraps itself around the sigmoid colon (passive component) in a clockwise or anticlockwise direction.	(Type A when clockwise and type B when anticlockwise).
Type II	The sigmoid colon (active component) wraps itself around a loop of ileum (passive component) in a clockwise or anticlockwise direction.	
Type III	The ileocecal segment (active component) wraps itself around the sigmoid colon (passive component).	

Notes: Reproduced from Alver G, Oren D, Tireli M, Kayabasi B, Akdemir D. Ileosigmoid knotting in Turkey. Review of 68 cases. *Dis Colon Rectum*. 36(12):1139–1147. <https://doi.org/10.1007/BF02052263>



REFERENCES:

1. Parker E. Case of intestinal obstruction: sigmoid flexure strangulated by the ileum. *Edinb Med Surg J*. 1845;64:306–8.
2. Shepherd JJ. Ninety two cases of Ileosigmoid knotting in Uganda. *Br J Surg*. 1967;54:561–6.

Post Op Events