

## Ileosigmoid Knot: Uncommon Cause of Intestinal Obstruction

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### Abstract

### Case Report

The ileosigmoid node is a rare cause of intestinal obstruction. Its ethiopathology remains poorly understood. The diagnostic approach is similar to that of occlusions in general but remains difficult, due to its rarity and clinical-radiological atypia. In the majority of cases the diagnosis is made intraoperatively. Hartmann colectomy should be preferred to ideal colectomy because of its high morbidity and mortality. The prognosis essentially depends on the time of admission, the general condition of the patient, the presence or absence of loop necrosis and the circumstances of the surgical intervention. We report the case of an occlusion with ileosigmoid node according to the experience of the hospital ibn tofail Marrakech.

**Keywords:** Ileosigmoidien knot, surgical management, colectomy, Hartmann, bowel obstruction.

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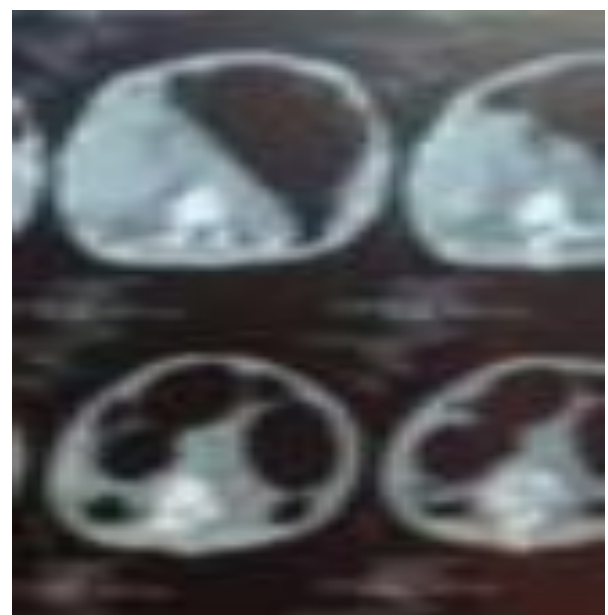
## INTRODUCTION

The ileo-sigmoid node (ISN) is a wrapping of the ileum around the base of the sigmoid colon, giving an intestinal occlusion by bifocal strangulation of the sigmoid and the ileum. This clinical entity represents a real surgical emergency requiring an early diagnosis for rapid surgical management. Nevertheless, the diagnosis usually made on intraoperatively due to its non specific presentation clinical feature, laboratory & imaging. CT is the diagnosis key of the ISN, its features are: 'the whirl sign' created by the twisted ileum and sigmoid, with multiple fluid air level. Its treatment is surgical. The mortality is high (varying between 15% and 30%). The prognosis is severe, the mortality is 6.8% to 8% in the non gangrenous forms and 20% to 100% in the gangrenous ones.

## OBSERVATION

65-year-old male patient, known to be a chronic smoker with no previous surgical history, admitted in the emergency department for intestinal obstruction syndrome and complaining of generalized abdominal colicky pain. His vitals were: Pulse 120 beats per minute, Blood pressure :80-40mmhg, respiratory rate 30 & SPO2:90%. CT abdomen scan showed small bowel dilatation suggestive of closed-loop obstruction (Picture 1). Chest CT: right

hilopulmonary tumoral process associated with total collapse of the ipsilateral lung and ipsilateral mediastinal adenopathy.



Picture 1: Chest x-ray: white right hemi field with slight tracheal deviation

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**Picture 2: Sigmoid resection specimen**

An urgent laparotomy was performed after an early resuscitation with antibiotic coverage, surgical exploration had found an enormous distension with necrosis of the sigmoid loop, the small bowel wrapping around the base of the sigmoid colon, making an ileosigmoid node, the ileum was viable. So a sigmoidectomy was performed with no anastomosis (Hartmann procedure). The patient was admitted to intensive care. The stay in intensive care was 5 days without apparent complication. Postoperative recovery was uneventful & discharged on 6<sup>th</sup> day for further follow-up in outpatient.

## DISCUSSION

The ileosigmoid node is a rare surgical emergency characterized by a double loop occlusion of the small intestine and the sigmoid [1, 2]. Several factors have been incriminated to explain Atamanalp *et al.*, [1] mentioned anatomical predispositions, such as hypermobility of the small intestine, too long a meso, and a short root can coil at the foot of the sigmoid colon. Alver *et al.*, [3] describe 3 types of NIS, whose mechanisms vary depending on the active segment responsible for the torsion: type I is represented by a small loop wrapping around a passive sigmoid loop, type II results from the opposite phenomenon where the sigmoid torsion, active, attracts passive hail, finally, type III corresponds to the exceptional situation where the ileocecal junction "ties" the sigmoid loop [4]. The clinical aspect of an ileo-sigmoid node combines acute abdominal pain, early vomiting, early cessation of transit with sometimes significant meteorism, depending on the tightening force of the knot and the engagement of the mesentery, this strangulation can quickly cause ischemic necrosis of the ileum and colon (74-80%) and progress in 56% of cases to a state of shock, hypovolemia and suffering with intestinal necrosis. The radiological diagnosis is difficult due to nonspecific signs but the abdomino-pelvic scanner is a key examination making it possible to suspect the diagnosis by highlighting a dilation of the sigmoid and

the small loops most often in a state of suffering associated with a defect of parietal enhancement. Before any surgery, preoperative resuscitation corrects and prevents hydro-electrolyte disorders. The approach is a midline laparotomy; the surgical procedure depends on the intraoperative circumstances, when the intestine is viable, some opt for the temptation to simply lift the knot, others prefer the resection of the sigmoid colon to prevent recurrences. In the event of intestinal necrosis, resection of the intestine, is recommended. An end-to-end or latero-coecal anastomosis is the rule, associated with an end-to-site anastomosis if the local and general conditions allow it, otherwise a left iliac colostomy is required, detorsion and sigmoidopexy is recommended in the rare cases where there is no sigmoid necrosis [4, 5].

## CONCLUSION

An early resuscitation, appropriate antibiotic & surgery with postoperative support minimize mortality rates.

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