

(CASE REPORT)



## Ileosigmoidian knot about an observation at the Donka CHU National Hospital in Conakry

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GSC Advanced Research and Reviews, 2021, 09(01), 032–035

Publication history: Received on 23 August 2021; revised on 04 October 2021; accepted on 06 October 2021

Article DOI: <https://doi.org/10.30574/gscarr.2021.9.1.0217>

### Abstract

**Introduction:** The ileosigmoid node is a double volvulus involving the sigmoid and the small intestine. The preoperative diagnosis is difficult in our practice setting. We report a case of ileosigmoid node that we discuss with data from the literature.

**Observation:** This was a 40-year-old man admitted for diffuse abdominal pain of progressive onset, paroxysmal, accompanied by cessation of materials and gas, profuse vomiting of food and hiccups, progressing for 24 hours. With a history of persistent constipation and episodes of sub-occlusion, clinical examination noted pain, abdominal distension and dullness of the flanks and inaudible peristalsis. The digital rectal examination noted an emptiness of the rectal bulb and a bulging of the Douglas. The biological assessment was unremarkable. The ASP showed an arched image. Confirmation was intraoperative with a small bowel volvulus around the sigmoid in the form of a node producing double ileal and sigmoid necrosis. We performed an ileo-ileal anastomosis resection and a left iliac colostomy using the Hartman technique. The postoperative follow-up was simple, the patient was discharged on D10 postoperative. Six weeks later the patient was readmitted for restoration of colonic continuity. Five months later, no complaints were reported.

**Conclusion:** The ileo-sigmoid node is a rare cause of intestinal obstruction, difficult to diagnose preoperatively in our exercise setting, the progression is rapid towards digestive necrosis. The availability of emergency CT examinations and early management of this condition would improve the prognosis.

**Keywords:** Intestinal obstruction; Ileosigmoid node; Necrosis; Conakry

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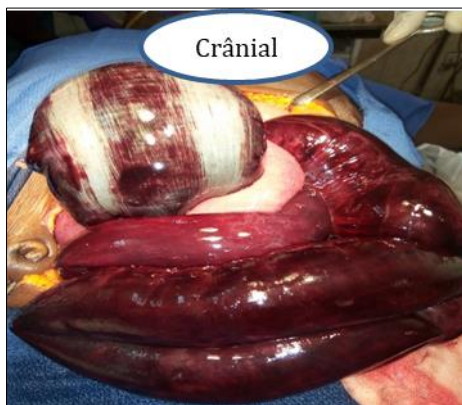
## 1. Introduction

The ileosigmoid node is a rare cause of strangulation of the small intestine. The latter revolves around the base of the sigmoid colon and forms a knot thus causing obstruction of the sigmoid. This clinical entity is exceptional in western countries, but it is common in some African, middle-eastern Asian nations. The ileosigmoid node is considered a true surgical emergency which rapidly progresses to intestinal necrosis. Knowledge of the mechanism of this pathology is therefore essential, in order to be able to make an early diagnosis and allow rapid surgical management [1].

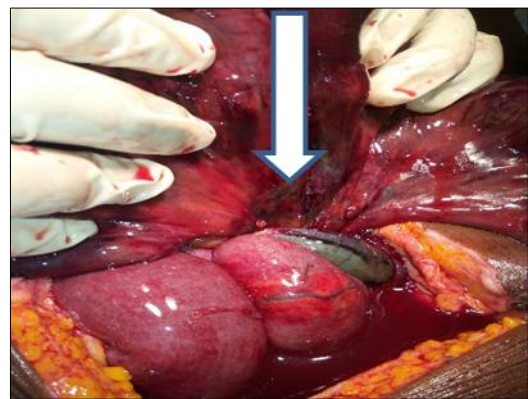
We report a case of ileosigmoid node.

## 2. Observation

it was MC, forty (40) years old, carpenter, admitted to our department for diffuse abdominal pain of progressive onset, paroxysmal, accompanied by stopping of materials and gas, abundant vomiting of food and of hiccups, evolving for twenty-four hours. With a history of persistent constipation, he reports several other sub-occlusive episodes.



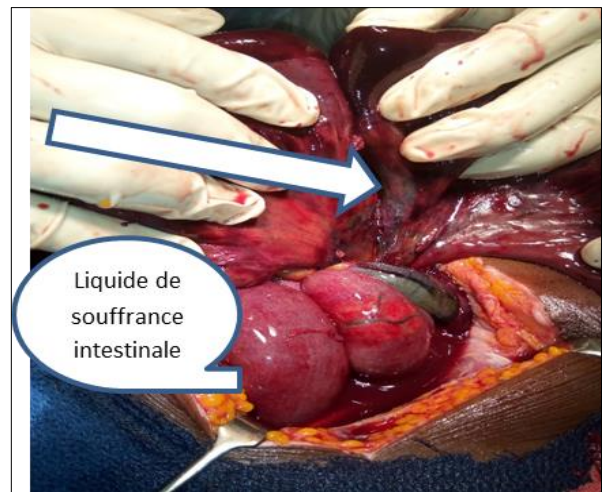
**Figure 1** Ileosigmoid necrosis



**Figure 2** Small intestine volvulus around the sigmoid



**Figure 3** Necrosis around the ileocecal node



**Figure 4** Ileocecal node

Clinical examination showed a lucid patient, writhing in pain, in general altered condition, with polypnea at 39 cycles / min, tachycardia at 113 / min and temperature at 37.9 Celsius. The abdomen was symmetrical, distended, painful in the umbilical and tympanic region. There was a declining dullness and inaudible peristalsis. The digital rectal examination noted an emptiness of the rectal bulb and a bulging of the Douglas.

The biological assessment showed a leukocyte level of 7.2 giga / l; a hemoglobin level of 15g / l with a hematocrit level of 45%; a creatinemia of 76 ummol / l; an AST at 26IU / l; an ALAT of 34IU / l; a blood sugar level of 1.83 g / l; negative AgHbs and SRV serology; blood typing and Rhesus A +. The unprepared abdomen x-ray showed a double-leg arched image

The patient was taken to the operating room after conditioning, and under antibiotic coverage, surgical exploration found a fluid from intestinal distress of great abundance about 1 liter which was evacuated; a small intestine volvulus around the sigmoid in the form of a node, with ileal necrosis over 1m to 50cm from the ileocecal junction and necrosis of the sigmoid loop (Figure 2). The patient underwent a monobloc resection of the necrotic small intestine and sigmoid, with an ileo-ileal anastomosis and left iliac colostomy according to the Hartman technique. The postoperative follow-up was simple, the patient was discharged on D10 postoperative. Six weeks later the patient was operated on for restoration of colonic continuity. Five months after the surgery, no recurrence was noted.

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### 3. Discussion

The ileosigmoid node or double ileosigmoid volvulus, is a rare surgical emergency which represents 7.6% of all sigmoid volvulus in France [2]. It mainly affects men in the fourth decade. It occurs in the majority of cases when a slender loop descends into the left paracolic gutter and rotates around the base of the sigmoid colon clockwise or counterclockwise and forms a knot [2]. Our patient was a fourth decade male. The clinical picture is that of an occlusion by strangulation with mixed signs, those of a high occlusion with early vomiting as well as those of a low occlusion with early stopping of materials and gases and sometimes severe meteorism [3]. In our case, the clinical picture was dominated by diffuse abdominal pain of progressive onset, paroxysmal, cessation of materials and gas, profuse vomiting of food and hiccups. The preoperative diagnosis is difficult because of its rarity and clinico-radiological atypia, it is possible in less than 20% of cases [4, 5].

The unprepared abdominal x-ray may show features of a closed-loop double occlusion with sigmoid hydro-aeric levels in the right upper quadrant, and others of a slender type that may be lateralized to the left [6], the more often it shows a sigmoid volvulus or an isolated small occlusion. The abdominal CT scan can aid in the diagnosis by showing the vortex sign with a median deviation of the cecum, descending colon, and the upper and lower mesenteric vessels that will converge on this vortex. Intestinal distension as well as signs of late-stage intestinal ischemia [7,8]. Our case only performed the unprepared x-ray of the abdomen which showed a double-leg arch image. The CT scan was not available on an emergency basis. This notes the limit of the technical means of our health systems on the one hand and on the other hand the financial insufficiency of patients to perform this type of examination.

The management is surgical and must be adapted and rapid, it is based on resection-anastomosis or colostomy if the intestinal segments are necrotic, detorsion and sigmoidopexy is recommended in the rare cases where there is no necrosis [9]. Four (4) types of NIS formation mechanisms are described in the literature, according to the active digestive segment responsible for torsion [2]. In type I the ileum is the active segment wrapping around the passive sigmoid, type II results from active sigmoid torsion which attracts passive small bowel, in exceptional type III it is the ileocecal junction which wraps around the sigmoid loop, while in indeterminate type IV it is not possible to differentiate the two segments. The management was surgical in our case and we found intraoperatively a volvulus of the ileal loop around the sigmoid in the form of a node as described in type I, with ileal and sigmoid necrosis. We performed an ileo-ileal anastomosis resection and a left iliac colostomy using the Hartman technique.

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### 4. Conclusion

The ileosigmoid node is a rare cause of intestinal obstruction. While the diagnosis of OIA is clinically easy, that of the type of occlusion is difficult in our practice setting. The evolution is done quickly towards digestive necrosis. The availability of emergency CT examinations and early management of this condition would improve the prognosis.

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### Compliance with ethical standards

#### *Acknowledgments*

Through this article, we would like to thank our dear teacher, Professor, Toure Aboubacar, Aissatou Taran Diallo, and Professor Monece Biro Diallo their effort to improve the scientific quality of this work.

*Disclosure of conflict of interest*

The authors declare that there were no conflicts of interest in the scientific writing of this work.

*Statement of informed consent*

All of the authors who appear in this article have an equal share of and agree to the publication of this article in your journal.

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