

## Occlusion by Ladd's Bands: Case Report

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### Abstract

### Case Report

The occlusion by Ladd's bands is a rare neonatal surgical emergency. So few cases have been published on this disease in Africa. We report a case of Ladd's bands volvulus in a 15-day-old newborn diagnosed by Doppler ultrasound. The evolution was good under surgical treatment.

**Keywords:** Ladd's bands, Doppler ultrasound, pregnancy.

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## INTRODUCTION

Ladd's bands is an exceptional congenital malformation. It is a peritoneal flange between the cecal region and the right posterior abdominal wall, which crosses the anterior surface of the 2nd duodenum and which can generate a volvulus.

The objective is to describe and discuss the radiological and ultrasound aspect in the diagnosis of a volvulus complicated by a Ladd band in a case observed at the Mohammed VI University Hospital Center (CHU) in Marrakech.

## OBSERVATION

This is a newborn on day 15 of life, female, from a well-monitored pregnancy carried to term without meconium emission anomaly, admitted to the pediatric emergency room for bilious vomiting since day 3 of life and arrest materials and since 4 days of his admission, On examination the newborn was pink, reactive, gesticulates spontaneously, soft abdomen not distended, no palpable mass, the hernia orifices are free, no dehydration or malnutrition anus in place

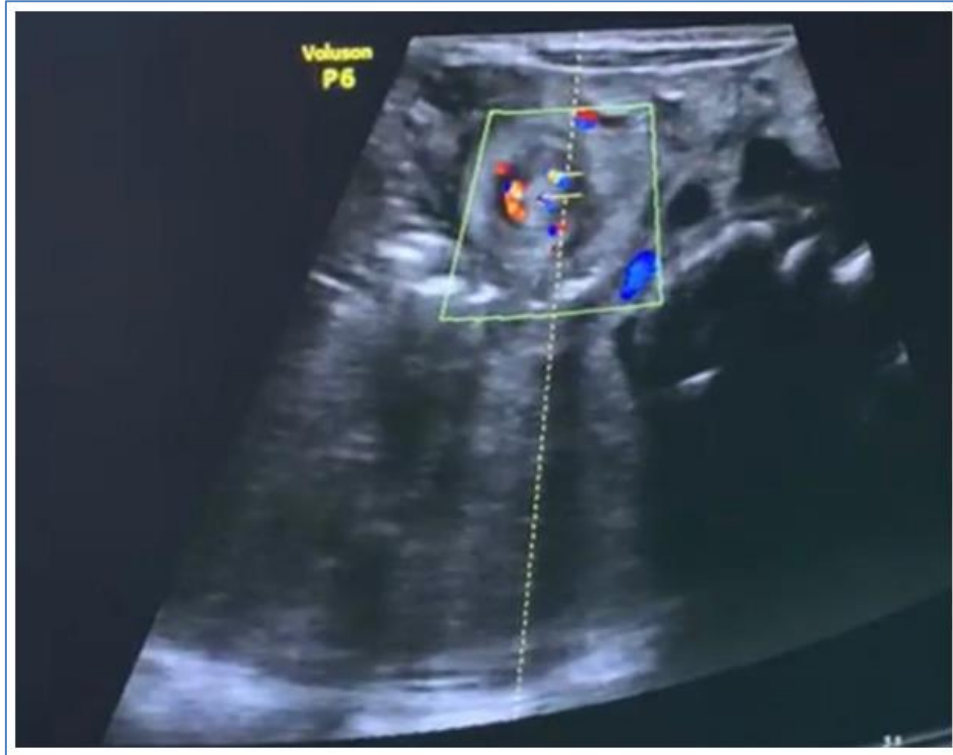
A plain x-ray of the abdomen with frontal view showed gastric stasis with poor colonic aeration and a hydroaortic level. (Figure 1).

Abdominal ultrasound showed a swirl image in the epigastrium, the site of superior mesenteric vessels with the presence of the mesenteric vein above and to the left of the superior mesenteric artery. (Figure 2).

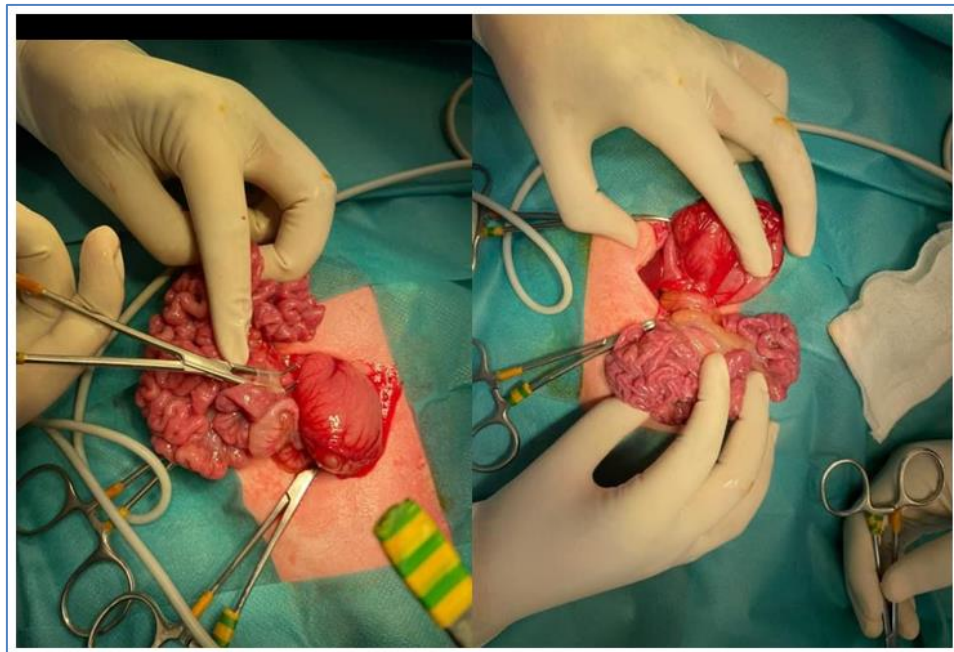
The patient was taken to the operating room for surgical exploration under general anesthesia, with transverse incision above the umbilical, the exploration revealed a volvulus on the common mesentery with two turns of turns without signs of intestinal suffering and the presence of a Ladd band which will be released as well as adhesions, untwisting and positioning of the complete common mesentery, extensive exploration does not find other anomalies, appendectomy in principle. The operative follow-up was simple with monitoring in intensive care and cessation of food for five days and antipiththerapy.



Figure 1



**Figure 2**



**Figure 3**

## DISCUSSION

Ladd's bands is a very rare malformation. The pathophysiology is embryological. It is secondary to cecal malposition following intestinal malrotation [8]. Intestinal rotation occurs between the fourth and twelfth week of gestation [6]. Our patient was 15 days old and female, she underwent surgery, allowing the diagnosis to be made. This lesion is neonatal, but the diagnosis can be

delayed by the sneaky and misleading characteristics of the clinical course of this disease [8].

More than half of patients present during the first month of life, and virtually all have bile-stained vomit [3]. According to several authors, radiography of the abdomen without preparation highlights gastric stasis in high- located incomplete occlusions which is not

specific to congenital flange volvulus, but helps guide the diagnosis [5- 10].

In recent years, Doppler ultrasound has been an alternative for the diagnosis of malrotations, with emphasis on the relationship between the superior mesenteric vessels and in the detection of the so-called "sign" whirlpool" in case of volvulus [1- 11].

Our patient benefited from a Doppler ultrasound and which showed an inversion of the mesenteric vessels with a spiral epigastric formation centered by the superior mesenteric artery with superior mesenteric vein located above and to the left of the artery, lighting up at color doppler and producing the whirlpool appearance sign »

The main specific CT sign corresponds to a wrapping of the superior mesenteric vein around the superior mesenteric artery [7]. The surgical treatment of intestinal rotation abnormalities by a median laparotomy or supraumbilical transverse approach in infants is the subject of consensus [7]. Laparoscopic surgery for intestinal malrotations is not the subject of consensus [7-12]. The Ladd procedure, which is well codified and which remains current, was performed on our patient. This technique described in 1941 to treat intestinal malrotations remains current and well codified [2- 7]. The general principle is a repositioning of the intestine into a "complete common mesentery" at 90°, corresponding to the initial stage of rotation of the primitive intestinal loop during embryonic life.

## CONCLUSION

Ladd's bands volvulus is a rare entity in newborns and may be likely responsible for serious complications. Doppler ultrasound is a fast, precise and easy-to-use means of diagnosis. The treatment is surgical.

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