

## Splenic volvulus on mobile spleen: About a case

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### **Abstract:**

*Splenic volvulus on mobile spleen is a rare entity, often due to a congenital malformation and rarely diagnosed preoperatively.*

**Presentation of the case:** *Patient aged of 30 years old consulted in the emergency room for a febrile abdominal pain syndrome evolving for 48 hours. Abdominal Defense and the palpation of a mobile mass at the level of the right hypochondrium overflowing on the midline forced us to hospitalize the patient for a broader diagnostic investigation. The ultrasound showed a hypo echogenic formation occupying the flank and the right intra-abdominal hypochondrium containing within it echoes, evoking a superinfected mesenteric cyst. The CT scan favored a malignant vascular mesenteric process. Faced with the aggravation of pain and the infectious syndrome a few hours later and a change in the site of the mass which swung to the left, an ultrasound was redone and corrected the diagnosis in favor of a large spleen with areas of necrosis within it, thus evoking a splenic volvulus. An emergency laparotomy was performed.*

**Conclusion:** *Splenic volvulus on mobile spleen remains difficult to diagnose given its rarity and the absence of specific clinical signs. The change in the site of the mass and the radiographic examination were of great help in the preoperative diagnosis. Emergency splenectomy is immediately performed in rapidly evolving forms to minimize complications.*

**Key words:** *Splenic volvulus, mobile spleen, emptiness of splenic lodge, Splenectomy.*

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### **I. Introduction**

Splenic volvulus on mobile spleen is a rare entity, often due to a congenital malformation and rarely diagnosed preoperatively. The lengthening of the pedicle is a predisposing factor in the genesis of this phenomenon; other anatomical factors may be involved.

### **II. Case presentation:**

Patient of 30 years old consulted in the emergency room for a febrile abdominal pain syndrome, progressing for 48 hours.

The medical history revealed that he was being followed in psychiatry (under Risperdal®); without any surgical history.

The clinical examination highlights a general state preserved, hyperthermia at 39.2°; a Defense with palpation of a moving mass at the level of the right hypochondrium extending beyond the midline; the rest of the exam was unremarkable

The biological examination suggests an anemia at 3.1.106 / mm<sup>3</sup>; and a rate of white blood cells at 8500/mm<sup>3</sup>.

### **III. Radiological examinations:**

- The ASP and the chest x-ray returned without any particularity.
- Ultrasound: showed a hypo echogenic formation occupying the flank and the right hypochondrium of 160 mm / 100 mm intra-abdominal containing within it echoes evoking a mesenteric cyst superinfected in addition to the presence of an ascites of average abundance and the rest of the examination is without particularity.
- The abdominal CT Scan revealed a mixed density formation (tissue and fluid) taking heterogeneous contrast measuring 153.5mm / 88.4mm sitting at the level of the hypochondrium and right flank, intraperitoneal, with ascites of small abundance; concluding that there is a malignant vascular mesenteric process (Fig 1).



#### IV. Discussion

RIOLAN in 1792 described for the first time the vagabond spleen [1], the latter is a rare anatomical entity only 500 cases have been reported in the literature [2]. The occurrence of a torsion constitutes a formidable complication whose incidence varies from 0.05% - 0.5% [3] with a predominance in children under 10 years [4], and in adult women in genital activity [5];

Several factors have been incriminated in the genesis of the splenic torsion which occurs in all cases on a mobile spleen. The responsible element is the hyperlaxity or agenesis of the ligament element. For some authors the causes are rather congenital in connection with an incomplete development of the dorsal mesogastrium or the sustentaculumlienis; while for others the causes are acquired following an abdominal trauma responsible for a diaphragmatic hernia, splenomegaly (malaria), or hormonal impregnation in women (pregnancy and multiparity) [6]. For our patient it was probably a congenital cause secondary to a total absence of the means of fixity of the spleen which was maintained only by its vascular pedicle.

The clinical manifestations of a splenic torsion are atypical; it can be paroxysmal painful crises due to splenic congestion in connection with spontaneous torsion and detorsion of the splenic vascular pedicle [6]; or an acute surgical picture with nausea, vomiting, and fever. The presence of an abdominal or pelvic mass can cause the diagnosis to be discussed and lead us to a radiological exploration [7].

This was the case for our patient, who presented with a febrile abdominal pain syndrome with a mobile mass at the level of the right hypochondrium which motivated the realization of an ultrasound and an abdomino-pelvic scanner.

The emptiness of the splenic compartment and the presence of an abdominal mass on ultrasound and CT scanner Allows to confirm the diagnosis of an ectopic spleen whose torsion will be confirmed by the absence of vascularisation on the doppler [8]

The splenic torsion in our case was only evoked after exacerbation of the pain with tilting of the mass from right to left "new torsion" confirmed by the second ultrasound.

In front of any splenic torsion, emergency surgery is essential. The laparoscopic approach is preferable to laparotomy because of the esthetic advantages it brings, post-operative pain, hospital stay, and early resumption of activity [9]. Two therapeutic attitudes can be indicated; splenopexy by omentopexy or by a non-absorbable net is indicated in the absence of splenic necrosis otherwise splenectomy is the rule [10]

We performed a laparotomy splenectomy; the spleen was without ligament attachment, swung around its axis (two turns) and dotted with infarction zones. The follow-up was simple, and the patient was referred to a hematology department (pneumococcal vaccine).

#### V. Conclusion

Splenic volvulus on mobile spleen remains difficult to diagnose given its rarity and in the absence of specific clinical signs. It is more often secondary to an absence of ligament attachment. The presence of an abdominal mass with the emptiness of the splenic compartment on radiology are of great diagnostic benefit. Splenectomy is the only therapeutic alternative for splenic infarction.

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