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General Surgery

Twisting an Ectopic Spleen: About A Case in the General Surgery Department of Sikasso Hospital (Mali)

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Abstract **Case Report**

Pedicle torsion is the most common complication of ectopic spleen. The observation we bring was the case of a 20 year old lady admitted to the emergency room with an acute surgical abdomen picture evolving for about two years. Clinical examination revealed generalized abdominal pain and a mass in the right iliac fossa. The torsion of the spleen was suspected by the clinic, the abdomino-pelvic ultrasound and confirmed during an exploratory laparotomy. Intraoperatively the spleen was necrotic on a long twisted pedicle indicating a splenectomy.

Keywords: Ectopic spleen, abdominal-pelvic ultrasound, torsion, splenectomy, splenopexy-Sikasso (Mali).

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Introduction

Ectopic or strolling spleen is a migration of the spleen into any quadrant of the abdomen secondary to a congenital or acquired abnormality of its means of attachment to the surrounding organs [1].Torsion of its pedicle remains a serious complication leading to splenic infarction. The diagnosis is clinical and confirmed by abdominal echography coupled with Doppler and or abdominal CT [2-4]. Treatment is surgical. Detorsion and splenopexy are performed in case of early diagnosis and splenectomy is performed in case of splenic infarction [5, 6]. The aim of this work was to report a case of torsion of the ectopic spleen managed at the hospital of Sikasso and then to review the literature.

Observation

Mrs. M.B, 20 years old, female, housewife and multigestate was referred for abdominal pain that started about two years ago, which was localized in the periumbilical region with moderate intensity, aggravated by movements and relieved by taking unspecified analgesic without associated signs. This picture motivated traditional treatments without success. The aftermath was marked by a worsening of the pain that had occurred one week before his admission, which was localized in the right iliac fossa and of strong intensity, associated with a notion of unquantified fever, early postprandial vomiting, a sensation of mass in the right iliac fossa and abdominal distension. This symptomatology motivated a consultation at the community health center of Koro-barrage (locality located at 100 Kilometers from the city of Sikasso) where a medical treatment was given without success. Given the persistence of the symptoms, she was referred to us for treatment. The medical and surgical history was without particularity. No notion of tobacco or alcohol consumption.

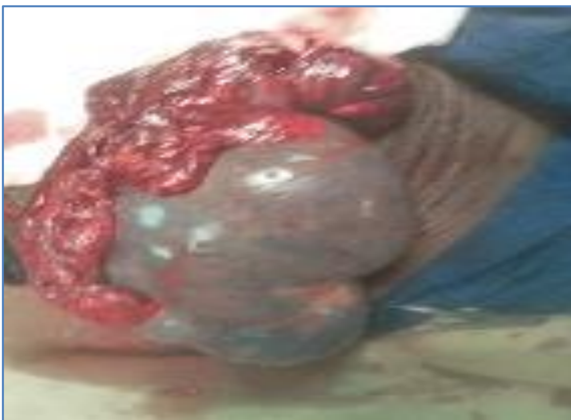
On admission, the Karnofsky index was estimated at 70%, blood pressure: 110/70mmhg and heart rate: 95 cycles/min. The body mass index was 18.4; the conjunctiva was stained; she had no jaundice or edema of the lower limbs and no signs of dehydration.

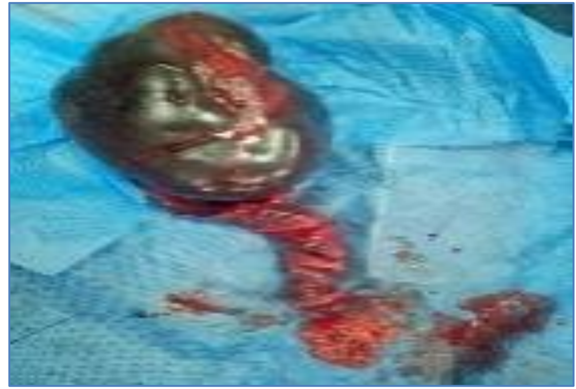
Examination found a slightly distended abdomen with decreased abdominal breathing and no surgical scarring; generalized abdominal pain and tenderness; a painful mobile mass in the right iliac fossa and poorly appreciated because of abdominal

distension, preserved prehepatic dullness, decreased hydroaerobic sounds, and a painful, nonbulging cul de sac of Douglas. The rest of the physical examination was normal.

In view of this peritoneal irritation syndrome, an unprepared abdominal X-ray was performed, which was normal. Abdominal and pelvic ultrasound showed a torsion of a large ectopic spleen in front of the empty splenic cavity and the presence of a mass in the right iliac fossa, which was not vascularized on Doppler. The CT scan was not performed.

She underwent emergency surgery after a short resuscitation and antibiotic prophylaxis with ceftriaxone. The incision was a median straddling the umbilicus. On exploration, we found a vacuity of the splenic compartment, the spleen was voluminous and located in the right iliac fossa, free with an absence of its means of fixation (the gastrosplenic omentum and the pancreatico-splenic and the splenocolic ligament); there was a torsion of its pedicle at three turns of the spiral in the direction of a clock and the spleen was necrotic. Splenectomy was performed. The postoperative course was simple. He was hospitalized for five days, was prescribed betalactam antibiotics and was vaccinated against meningitis and pneumococcus before discharge. The anatomical-pathological examination of the surgical specimen showed foci of splenic ischemic necrosis.





DISCUSSION

Ectopic spleen is an entity that is often encountered in women in the activegenital period [6, 7]. Torsion of its pedicle is the most frequent complication; and is a rare cause of acute abdominal pain [2]. Congenitally, it is the consequence of splenic hypermobility due to the absence or abnormal development of the suspensory ligaments of the spleen, which are, among others, the splenic ligaments (the gastrociliac and lienorenal ligaments) and the phrenocolic ligament. Incomplete development or laxity of the ligaments causes hypermobility of the spleen resulting in a wandering spleen and an ectopic position of the spleen [8]. On the acquired level, several factors have been incriminated; such as gastric distension; splenomegaly; abdominal hyperlaxity; abdominal trauma and pregnancy [9]. In our case, the complete absence of suspensory ligaments confirms the congenital origin of this ectopic spleen.

The majority of patients with an ectopic spleen are asymptomatic. Those who are symptomatic present either with intermittent abdominal pain at spontaneous torsion-detorsion responsible for intermittent splenic ischemia and congestion, or with an acute abdomen related to splenic infarction secondary to complete torsion of the pedicle as in our case. An ectopic spleen can also be responsible for an obstructive syndrome with a depressive phenome [10].

For the diagnosis of pedicle torsion of an ectopic spleen, several imaging techniques can be used. Abdomino-pelvic ultrasound, which allows to note the vacuity of the splenic cavity and the presence of an abdominal mass reminiscent of the splenic echostructure; the absence of vascularization on Doppler is an argument in favor of the torsion [3-5]. However, abdominal CT with contrast injection remains the gold standard examination showing a pathognomonic sign: a spiral aspect of the splenic vessels [11]. Due to the lack of emergency availability in our hospital, the CT scan was not performed in our patient. Exploratory surgery is the only way to confirm the diagnosis and to adopt the treatment method. A splenectomy is performed in case ofplenic infarction as was the case in our patient. Splenopexy is indicated in

the case of a viable spleen, symptomatic or not, in order to preserve its role in the reticuloendothelial system, longignored [12, 13].

CONCLUSION

The diagnosis of torsion of an ectopic spleen must be evoked in front of the association of an acute surgical abdomen with an abdominal mass. Abdominal pelvic ultrasound is the first line of investigation in our practice. Splenectomy is indicated in case of splenic infarction and splenopexy is reserved in the absence of necrosis and especially in young subjects.

RÉFÉRENCE

1. Ribault, L., Vergos, M., & Ribault, A. (1990). Deux cas de rate ectopique en position pelvienne. *Médecine d'Afrique Noire*, *37*(1).
2. Nyundo, M., Ntirenganya, F., Byiringiro, J. C., Ntakiyiruta, G., & Gashegu, J. (2011). Torsion d'une rate ectopique se présentant comme un abdomen aigu. *Revue Medicale de Bruxelles-Nouvelle Serie*, *32*(5), 477.
3. Rasheed, B., Ahmed, F., Iqbal, Z., Babar, S., & Ahmed, N. (2011). Wandering spleen with tortion leading to infarction. *European Journal of Radiology Extra*, *77*(1), e5-e7.
4. Puglisi, F., Potenza, A., Melchionda, M., Capuano, P., De Fazio, M., Lobascio, P., ... & Lograno, G. (2005). Wandering spleen as a cause of acute abdomen: a case report. *Chirurgia italiana*, *57*(3), 373-375.
5. Befikadu, S., Gudu, W., & Abseno, N. (2004). Torsion of a pelvic wandering spleen as a cause of acute abdomen in a woman: a case report and review of the literature. *Ethiopian medical journal*, *42*(1), 53-61.
6. Misawa, T., Yoshida, K., Shiba, H., Kobayashi, S., & Yanaga, K. (2008). Wandering spleen with chronic torsion. *The American journal of surgery*, *195*(4), 504-505.
7. Kapan, M., Gümüş, M., Önder, A., Gümüş, H., & Aldemir, M. (2012). A wandering spleen presenting as an acute abdomen: case report. *The Journal of emergency medicine*, *43*(5), e303-e305.
8. Moore, K.L. (1992). The abdomen. In: Satterfield TS, ed. clinically oriented anatomy. 3rd ed. Baltimore, Williams & Wilkins, 127-242
9. Sodhi, K. S., Saggar, K., Sood, B. P., & Sandhu, P. (2003). Torsion of a wandering spleen: acute abdominal presentation. *The Journal of emergency medicine*, *25*(2), 133-137.
10. Dejohn, L., Hal, H., & Winner, L. (2008). Wandering spleen: a rare diagnosis with variable presentation. *Radiology Case Reports*, *3*(4), 229.
11. Raissaki, M., Prassopoulos, P., Daskalogiannaki, M., Magkanas, E., & Gourtsoyiannis, N. (1998). Acute abdomen due to torsion of wandering spleen: CT diagnosis. *European radiology*, *8*(8), 1409-1412.
12. Cohen, M. S., Soper, N. J., Underwood, R. A., Quasebarth, M., & Brunt, L. M. (1998). Laparoscopic splenopexy for wandering (pelvic) spleen. *Surgical laparoscopy & endoscopy*, *8*(4), 286-290.
13. Dossouvi, T., N'Timon, B., Adabra, K., Dagbe, M., Botcho, G., Leyman, P., & Dosseh, D. (2016). Torsion d'une rate ectopique: a propos d'un cas au CHU Kara (Togo).