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# *Diagnostic and management distinctive features of an wandering spleen*

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**Abstract**: abdominal or pelvic drifting spleen is due to the abnormalities or the failure of its attachment to the diaphragmatic cupola, more specifically the laxity of the suspensory ligaments that may be congenital or secondary. Diagnosis is often incidental thanks especially to medical imaging. We report a new typical case of wandering spleen. And our aim is to recall the difficulties of diagnostic of this rare pathological entity and their surgical approach.

**Keywords**: Diagnostic Imaging; Displaced Spleen; Surgical Approach

## Introduction

Any healthy or pathological spleen is ectopic when superior pole is devoid of its connections with the diaphragmatic cupola [1]. The migration of the wandering spleen, congenital or acquired, to any quadrant of the abdomen or pelvis depends on the length of its pedicle [2, 3]. The interest of this observation is to report a new typical case and to recall the difficulties of diagnostic of this rare pathological entity and their surgical approach.

## Case Report

A 27-year-old woman consults for afebrile chronic pelvic pain. Clinical examination finds a painful and fixed pelvic mass. The abdominal ultrasound discovered a vacuity of the splenic lodge, and a homogeneous tissue formation in hypogastric site. Elsewhere, no particularity has been noted. The abdominal CT scan revealed a homogeneous normal size liver with regular outline and undistended intra- and extrahepatic bile ducts, thin-walled gallbladder, a physiological splenic lodge occupied by digestive structures (Figure 1) and an homogeneous pancreas with regular contour and curved caudal portion along the splenic artery path to the hypogastric site (Figure 2).

In the pelvic topography is localized a homogeneous tissue formation which takes “tiger” typical appearance at arterial time **(Figure 3)** corresponding to the spleen with normal size. The sagittal cross section showed the vascularization of the spleen by a branch of the celiac trunk **(Figure 4)** and the path of splenic artery to the pelvic wandering spleen **(Figure 5)**.

Else, the uterus had normal size with a homogeneous myometrium and a fine endometrium. Surgery by laparotomy was performed immediately in the course of which the exploration confirmed the hypogastric site of the spleen. Splenectomy was done with smooth postoperative recoveries. And patient had immunization converage against pneumocoque and Haemophilus influenza two weeks after the operation.

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**Discussion**

Ectopic spleen is a rare entity with less than 500 cases reported on 2011, probably due to long-lasting forms asymptomatic [2, 4]. However, it is often unfortunately discovered during a complementary examination performed for another pathology at any age, with a peak frequency in children under 10 years and women during periods of genital activity, in a patient without particular medical history [2, 3]. A male predominance has been demonstrated in children under 10, whereas female predominance is observed in adults [5]. Only intraperitoneal localization is described with hypogastric or pelvic predilection [1, 2].

Drifting spleen is due to the lack or uncompleted development of its suspensory ligaments, especially the posterior mesogastrium attachment [5,6]. Many factors were reported in acquired forms such as gastric distention, splenomegaly, abdominal hyperlaxity or weakness of the abdominal wall tone, abdominal injury, hormonal change during pregnancy and multiparity [2, 3]. Ectopic spleen is associated with accessory spleen in 10% of cases [6]. Torsion of the splenic pedicle is the most feared complication in ectopic spleen, and it is fostered by pedicle length, mobility, and spleen weight [5, 7]. Wandering spleen may remain asymptomatic for a long time and circumstances surrounding their discovery are numerous, variable, nonspecific dominated by abdominal, pelvic or peri-umbilical chronic pain, with variable intensity, intermittent according to the persistence of spontaneous splenic torsion and detorsion [2, 3]. On clinical examination, it is suspected in front of firm, matt, painful and mobile pelvic or abdominal rounded mass [1].

In case of pedicle torsion with splenic ischemia, nonspecific digestive signs (nausea, vomiting) with or without fever may be associated [5]. In tropical countries as Madagascar, we must beware of parasitic splenomegaly which may simulate an abdominal or pelvic tumor or a chronic volvulus and may be responsible for an obstructive syndrome by the surrounding organs compression [3, 4]. Alteration of the general state, clinical anemia caused by parasitic hypersplenism and signs of toxi-infection may be noted in the severe form [1, 2, 4]. Management of ectopic spleen comes up against difficult clinical diagnosis. Then imaging are fundamental in their diagnosis: the splenic lodge emptiness, the spleen site and size [7]. In our country, abdominopelvic ultrasonography is the first reference examination because it is easy to perform and cost less. Else, abdominal CT may highlight heterogeneous enhancement spleen with a spiral pathognomonic appearance of its vessels at arterial time, its homogenization at portal time and the congenital origin may be specified by the lack of gastrolienal, pancreatico-splenic and splenocolic ligament [4, 7]. The torsion of its pedicle will be suspected in front of acute abdominal pain associated with amputation of splenic arterial perfusion and whirlwind appearance of twisted pedicle [3, 4]. Once the diagnosis of ectopic spleen is confirmed, surgical exploration should be performed to avoid the risk of pedicular torsion which complication are potentially lethal [5, 7]. The choice of surgical procedure is controversial for uncomplicated ectopic spleen: either a splenopexy consisting of fixing the spleen in its normal anatomical position which is followed by a high rate of splenic torsion recurrence, either a splenectomy which is considered as the only lawful treatment protecting against complications [1, 5]. But another authors doubt about the benefits of operating an uncomplicated splenic ectopia because of the risks involved by the splenectomy such as repeated infectious complications [1].

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And especially in african countries, authors noted 3,16% to 6,25 % of death postoperative cases following septicemia [8]. However, in front of the necrotic patches on twisted spleen, splenectomy should be performed systematically if the perfusion of the spleen could not be restored after detorsion [7].

## Conclusion

In our context, the diagnosis of an ectopic spleen is still a challenge because of the low rate of accessibility of patients to performing imaging examinations, especially in the case of asymptomatic wandering spleen. And because of our high endemicity in parasitic splenomegaly, splenectomy would be worthwhile from the outset in front of a diagnosed ectopic spleen, even uncomplicated, to avoid the additional risks incurred by later complication which are unpredictable.

### Conflicts of interest

Authors do not declare any conflict of interest.


**Figure 1:** Arterial time of abdominopelvic CT with injection of product iodized (axial section): physiological splenic lodge occupied by digestive structures including grelics and a normal topography of the head and body of the pancreas


**Figure 2:** Arterial time of abdominopelvic CT with injection of product iodized (coronal section): dehiscence of the pancreas' tail of which follows the spleen in intra- pelvic

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**Figure 3:** Arterial time of abdominopelvic CT with injection of prod uct iodized (axial section): pelvic topography of spleen with "tiger" typical appearance

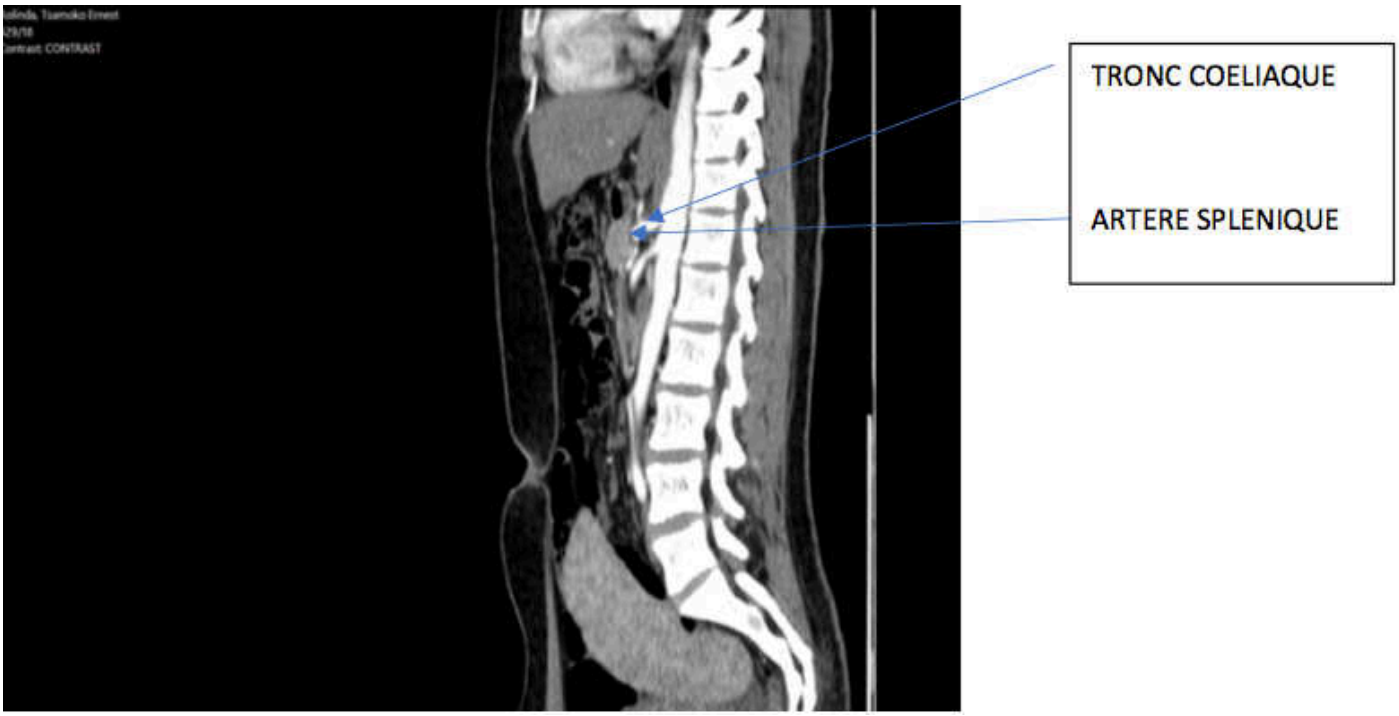


**Figure 4:** Arterial time of abdominopelvic CT with injection of product iodized (sagittal cross section): birth of the splenic artery on the celiac trunk

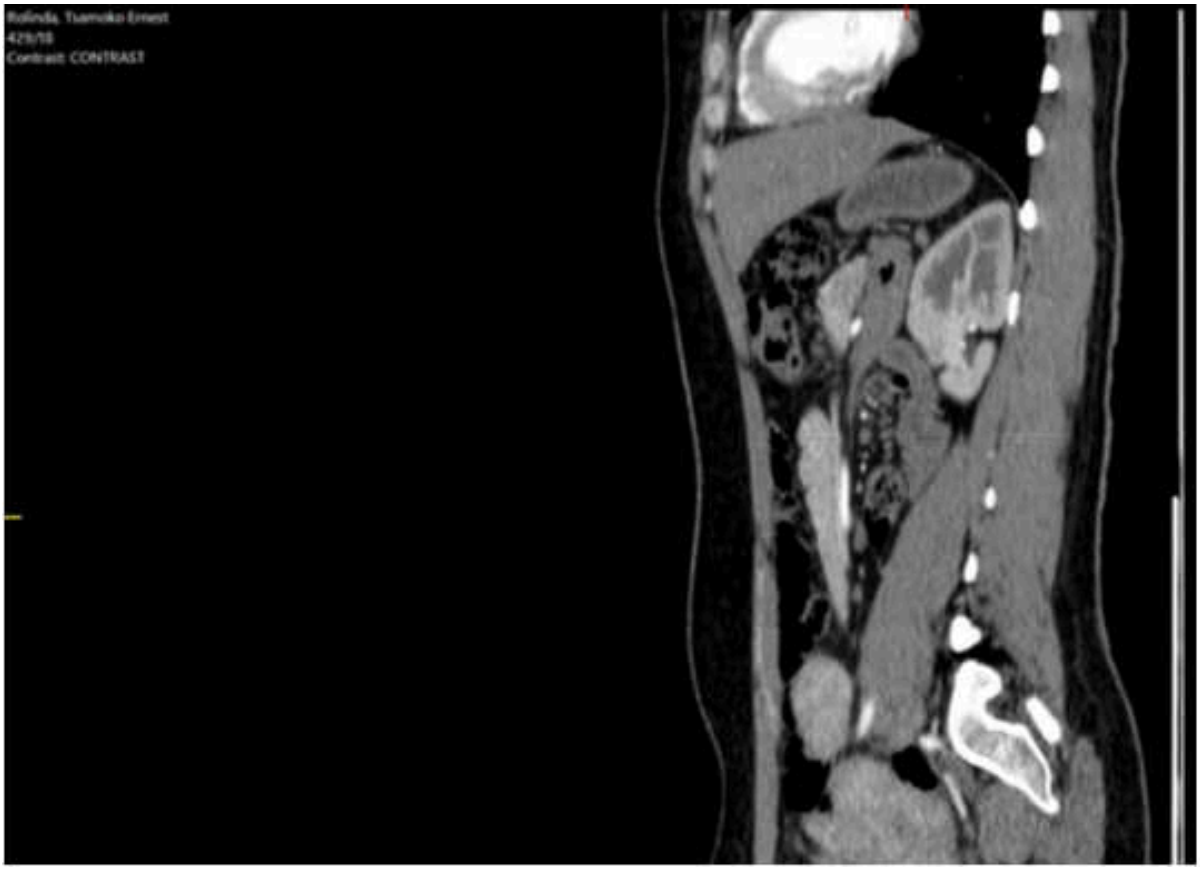


**Figure 5:** Arterial time of abdominopelvic CT with injection of product iodized (sagittal cross section): splenic artery follows the spleen in pelvic position

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