

Contribution of CT Scan in the Diagnosis of Spiegel's Hernia at the Marie Curie Medical Clinic: A Case Report

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ABSTRACT

Spiegel's hernia is a rare pathology representing 1 to 2% of abdominal hernias. The clinical diagnosis is difficult with a very high risk of strangulation. Computed tomography allows the diagnosis and highlights the dehiscence but also the contents of the hernial sac which can be the omentum, small intestine, cecum, appendix or sigmoid. We report the case of a Spiegel's hernia complicated by occlusion in a 71-year-old lady at the Marie Curie medical clinic with the aim of writing the aspect of computed tomography in the diagnostic management of this pathology.

Keywords

Spiegel's hernia, Dehiscence, CT scan, Occlusion, Medical clinic "Marie Curie".

Introduction

Spiegel's hernia is a rare pathology, corresponding to an unusual dehiscence appearing on the line or semilunar face of Spiegel [1]. It represents 1 to 2% of all hernias of the abdominal wall. The etiopathogenesis often involves a dehiscence of the aponeurosis of the transverse and the weaker internal oblique muscle in the vicinity of the arcuate line [1,2]. The most common complication is hernial strangulation causing acute intestinal obstruction [3]. Abdominal CT (computed tomography) remains the key examination for confirming the diagnosis with high sensitivity, it allows to see the dehiscence and the contents of the hernial sac [4]. We report the case of a Spiegel hernia complicated by occlusion in a 71-year-old lady at the Marie Curie medical clinic. Our objective is to describe the CT aspect in the diagnostic management of Spiegel hernia.

Observation

This was a 71-year-old female patient, residing in Bamako with

no particular medical or surgical history. She had performed an abdominopelvic ultrasound in view of the clinical signs such as pain plus vomiting on swelling of the right flank. This abdominopelvic ultrasound scan performed by a General Electric (GE) Voluson 730 Pro ultrasound machine equipped with 3 probes including the 2 to 5 MHz multi-frequency deep probe was used for her examination. This examination was inconclusive due to the presence of meteorism and obesity. Given this limitation of the ultrasound scan, the patient was referred to the Marie Curie medical clinic for an abdominopelvic CT scan performed with a GE brand multi-strip scanner of the Optima type (16 strips). The CT scan performed in helical acquisition with one pass without injection and passes after injection of contrast product (PDC) had objectified: a dehiscence of the right abdominal wall with solution of continuity and a hernial sac with intestinal and omental content through a neck measuring 19 mm in diameter (Figure 1). The herniated intestinal content was thin-walled and dense small intestine. It was associated with small intestine distension measuring 34 mm in anteroposterior diameter, the site of a fluid-air level (Figure 2). There was no parietal pneumatosis or visible enhancement defect at the level of the small intestine wall.

Peritoneal effusion and pneumoperitoneum were absent. There was the presence of a triangular hypodensity with a peripheral base and hilar apex at the level of the lower pole of the left kidney related to a focus of acute pyelonephritis (Figure 3).

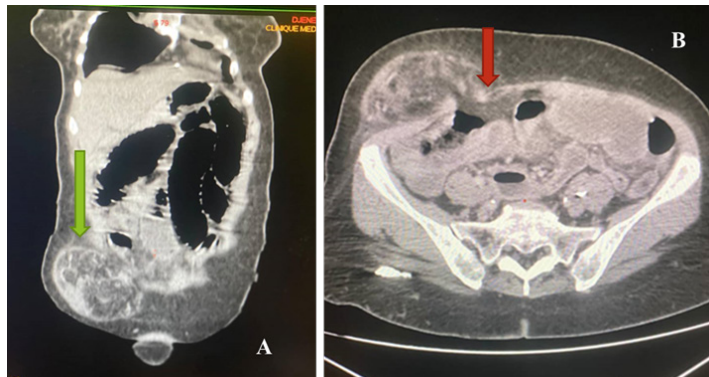


Figure 1 (A and B): Abdominal CT scan with coronal (A) and axial (B) reconstruction showed a dehiscence with 19 mm continuity at the level of the abdominal wall of the right iliac fossa with epiploid and intestinal contents.

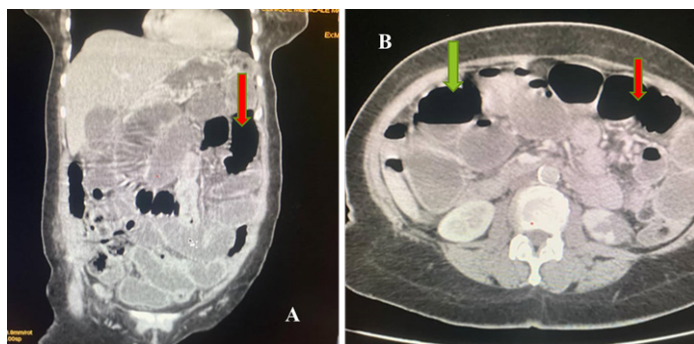


Figure 2 (A and B) : Abdominal CT scan in coronal (A) and axial (B) reconstruction revealed small intestinal distension measuring 34 mm in antero-posterior diameter (Red arrow), located at the hydro-aeric level (Green arrow).



Figure 3: Abdominal CT scan with coronal reconstruction revealed a triangular hypodensity with a peripheral base and hilar apex suggesting a

focus of left pyelonephritis.

Discussion

Spiegel hernias are rare [2,3]. They correspond to the protrusion of a peritoneal sac through an acquired or congenital anatomical orifice of the Spiegel line. Their incidence is increasing sharply given the improvement of modern imaging techniques [5]. Spiegel hernias occur at any age with a peak between 40 and 70 years [2]. They affect both women and men [3]. Our observation was a 71-year-old female subject. There are predisposing factors such as intra-abdominal hyperpressure secondary to morbid obesity, multiple pregnancies and chronic cough. Rapid weight loss in obese patients can also play a role [5]. Our patient had a risk factor which was obesity. The hernia develops in an interparietal situation between the external oblique muscle in front and the internal oblique and transverse muscle behind. In most cases, the hernial sac contains omentum, small intestine, cecum, appendix or sigmoid [6]. In our case, the contents of the sac were omentum and intestinal (small intestine). The neck of the hernia is generally narrow, 0.5 to 20 mm, and therefore, it is responsible for incarcerations and strangulations with occlusive syndrome [3,6].

The neck of our patient's hernia was measured at 19 mm, which was responsible for a small intestine obstruction. The clinical signs are not very specific [4,6]. Abdominal pain, vomiting and swelling in the right flank were the clinical signs present in our patient. These signs were more due to her occlusive syndrome, which is one of the unfortunate consequences of Spiegel's hernia. Ultrasound and especially CT scans are useful for diagnosis [2]. They can highlight the hernial sac between the external and internal oblique muscles, as well as the solution of continuity at the Spiegel line. The CT scan specifies the contents of the sac [3,6]. Our observation had benefited from ultrasound, which was inconclusive given her obesity. The epiploic and intestinal incarceration was objectified by the abdominal CT scan. The presence of a focus of pyelonephritis was isolated. No explanation was found in the literature, nor any relationship with hernia or even its complications such as acute intestinal obstruction.

Conclusion

Spiegel's hernia is a rare pathology in adults, little known by the majority of primary care physicians. The clinical diagnosis is difficult, hence the interest of CT scan with the progress of medical imaging allowing adequate management.

Référence

1. Mamadou Diallo, Konate M, Diakite IK, et al. Spiegel's Hernia: About a Case. *Health Sci. Dis.* 2020; 24: 99-100.
2. Abid M, Mzali R, Feriani N, et al. Spiegel's hernia: report of a case and review of the literature. *J.I.MSfax.* 2009; 17: 336-373.
3. Noomene R, Bouhafa A, Maamer AB, et al. Spiegel hernias. *Medical Press.* 2014; 43: 247-251.
4. Akpo G, Deme H, Badji N, et al. Computed tomographic diagnosis of a strangulated Spiegelian hernia: a case report. *Pan Afr Med J.* 2016; 25: 222.

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5. Alan T. Richards. Spigelian Hernias. Operative Techniques in General Surgery 2004; 6: 228-239.
 6. Rakototiana AF, Rakoto-Ratsimba HN, Hunald FA, et al. Spiegel's hernia complicated by necrotizing fasciitis of the abdominal wall: A case report. Revue Tropicale de Chirurgie. 2008; 2: 5-7.