

Utility of CT in the diagnosis of an incarcerated Spigelian hernia without palpable abdominal mass

Ibrahima Niang, Khadim Mbacké Ndiaye, Mamadou Ly, Abdourahmane Ndong, Mbaye Thiam, Sokhna Ba

ABSTRACT

Introduction: Spigelian hernia is a rare type of ventral abdominal wall hernia. We report the case of an incarcerated Spigelian hernia without palpable abdominal mass diagnosed by computed tomography (CT) scan. **Case Report:** We report a case of a 63-year-old obese male patient with no particular pathological or surgical history received for bowel obstruction. The abdominal CT concluded to an incarcerated Spigelian hernia whereas this diagnosis was not considered at the clinical examination in the absence of visible or palpable mass on the anterolateral abdominal wall. **Conclusion:** This case report illustrates the key place of CT scan in this form of clinical presentation of Spigelian hernia.

Keywords: Bowel obstruction, CT scan, Spigelian hernia, Strangulation

How to cite this article

Niang I, Ndiaye KM, Ly M, Ndong A, Thiam M, Ba S. Utility of CT in the diagnosis of an incarcerated Spigelian hernia without palpable abdominal mass. Int J Case Rep Images 2020;11:101162Z01IN2020.

Article ID: 101162Z01IN2020

Ibrahima Niang¹, Khadim Mbacké Ndiaye¹, Mamadou Ly², Abdourahmane Ndong¹, Mbaye Thiam¹, Sokhna Ba³

Affiliations: ¹Resident, Radiology Department, Fann University Hospital Center, Dakar, Senegal; ²Assistant, Surgery Department, Gaston Berger University, Saint-Louis, Senegal; ³Professor, Radiology Department, Fann University Hospital Center, Dakar, Senegal.

Corresponding Author: Ibrahima Niang, 5035 Fann, Dakar, Senegal; Email: niangibrahimaniang@gmail.com

Received: 26 July 2020

Accepted: 14 August 2020

Published: 05 September 2020

doi: 10.5348/101162Z01IN2020OCR

INTRODUCTION

Spigelian hernia is a rare condition accounting for 0.1–2% of abdominal wall hernias in adults [1]. It is often responsible for an abdominal mass next to the Spiegel line [2]. The generally narrow hernial ring is the cause of complications with the onset of bowel obstruction by incarceration [3]. We report the case of an incarcerated Spigelian hernia without palpable abdominal mass diagnosed by computed tomography (CT) scan.

CASE REPORT

This was a 63-year-old male, obese with a body mass index (BMI) of 34 without surgical history. He consulted to the emergency department for intestinal obstruction consisting of abdominal pain, vomiting evolving for three days. The blood pressure was at 130/80 mmHg, the temperature was at 37.7 °C, and the respiratory rate at 25 breaths/min. Physical examination showed no visible or palpable mass. There was no tenderness and the rest of the exam was unremarkable. The usual laboratory tests were normal. An abdominal CT scan was performed. It revealed a dilatation of small bowel, measured at 38 mm with a flat colon (Figure 1). On the right side of the anterior abdominal wall at 30 mm below the umbilicus, at the outer edge of the rectus muscle, a parietal defect between the internal and external oblique muscles was visualized, corresponding to an interstitial Spigelian hernia (Figure 2). The hernial ring was measured at 15.5 mm and the hernial sac contained flat small bowel and epiploic fat (Figure 3). The CT scan did not find any sign of digestive ischemia or extra digestive air.

Elective surgical exploration centered on the mass confirmed the diagnosis of incarcerated Spigelian hernia, containing a viable content (small bowel). Reduction of the hernia and a parietal repair with an aponeurorrhaphy using Mersuture 0 was performed. The postoperative

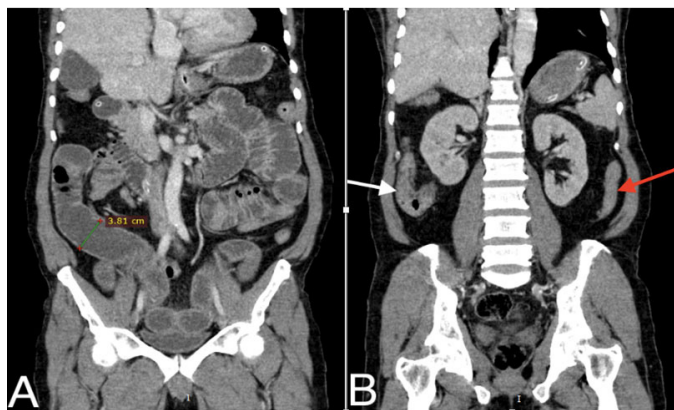


Figure 1: Coronal reconstruction abdominal CT scan with injection of iodinated contrast product at the portal phase. (A) The diffuse dilation of small bowel loops is shown. (B) Flat colon, ascending colon (white arrow), descending colon (red arrow) are shown.

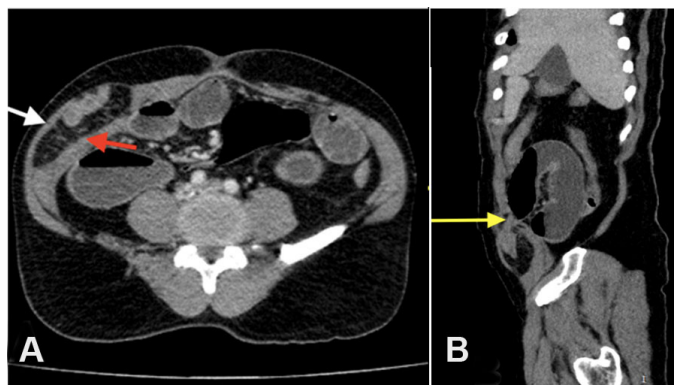


Figure 2: Abdominal CT scan with injection of iodinated contrast product at the portal phase. (A) Axial section showing the interstitial hernia located between the muscles external oblique (white arrow) and internal oblique (red arrow). (B) Sagittal reconstruction showing the transition zone with the sign of the beak of the incarcerated loop.



Figure 3: Coronal reconstruction of abdominal CT scan with injection of iodinated contrast product at the portal phase shows the hernial neck (red line) and the hernial sac containing an undilated small bowel loop (arrow) accompanied by omental fat (star).

course was uneventful. There was no recurrence after four months of follow-up.

DISCUSSION

Spigelian hernia, also called lateral ventral hernia, is an acquired or congenital dehiscence of the anterolateral abdominal wall. It is rare, representing between 0.1% and 2% of abdominal hernias in adults [1]. It occurs most often in obese people aged around 50 years [4, 5]. The other risk factors are the causes of intra-abdominal hyper pressure (chronic cough, intense and repeated pushing efforts) and repeated pregnancy.

In our patient, the risk factors found were advanced age and obesity. There was no chronic cough, heavy labor, or signs of prostatic disease.

The clinical presentation of Spigelian hernias is often a swelling with a mass on the semilunar line [2]. Moreover,

in 36% of cases, there is no mass visible or palpable at clinical examination [6]. This was the case in our patient and this could be explained by the fact that the hernia was interstitial and its contents were not dilated. With this presentation, CT scan plays a key role for a positive diagnosis. Some authors attribute to it a specificity and a sensitivity greater than 90% [7]. In addition, CT scan also makes the diagnosis of viability of the hernial contents. Some authors attribute to it a specificity and a sensitivity greater than 90% [7]. In addition to the positive diagnosis CT scan also makes the diagnosis of viability of contents of a hernial sac.

Spiegel hernias are asymptomatic in 9 out of 10 cases, but the risk of strangulation is high. This risk is greater when the hernial neck is narrow with interstitial situation of the hernia [8]. In our patient these two factors were combined.

CONCLUSION

Spigelian hernia is a rare type of ventral abdominal wall hernia. Its diagnosis can often be evoked with clinical examination when there is a swelling on the semi-lunar line. But in the absence of this parietal mass, CT is the key examination both for a positive diagnosis and for assessing the nature and viability of the contents of the hernial sac.

REFERENCES

1. Chaouch MA, Nacef K, Chaouch A, Khalifa MB, Boudokhane M. A Spigelian hernia: Single-center experience in an uncommon hernia. *Int J Abdom Wall Hernia Surg* 2019;2(2):59–62.
2. Sall I, Diémé EG, Mbengue A, et al. The Spieghe's interstitial hernia. *J Afr Hepato Gastroenterol* 2017; 21:1–3.
3. Guivarc'h M, Fonteny R, Boche O, Rouillet-Audy JC. So-called Spiegel's anterolateral ventral hernia. 16 cases and a review of the literature. [Article in French]. *Chirurgie* 1988;114(7–8):572–8.
4. Spangen L. Spigelian hernia. *World J Surg* 1989;13(5):573–80.
5. Akpo G, Deme H, Badji N, et al. Diagnosis of strangulated Spiegel hernia based on CT scan: About a case. [Article in French]. *Pan Afr Med J* 2016;25:222.
6. Larson DW, Farley DR. Spigelian hernias: Repair and outcome for 81 patients. *World J Surg* 2002;26(10):1277–81.
7. Sinha R, Rajiah P, Tiwary P. Abdominal hernias: Imaging review and historical perspectives. *Curr Probl Diagn Radiol* 2007;36(1):30–42.
8. Losanoff JE, Jones JW, Richman BW. Recurrent Spigelian hernia: A rare cause of colonic obstruction. *Hernia* 2001;5(2):101–4.

Author Contributions

Ibrahima Niang – Conception of the work, Design of the work, Acquisition of data, Analysis of data, Interpretation of data, Drafting the work, Revising the work critically for important intellectual content, Final approval of the version to be published, Agree to be accountable for all aspects of the work in ensuring that questions related to the accuracy or integrity of any part of the work are appropriately investigated and resolved

Khadim Mbacké Ndiaye – Acquisition of data, Interpretation of data, Revising the work critically for important intellectual content, Final approval of the version to be published, Agree to be accountable for all aspects of the work in ensuring that questions related to the accuracy or integrity of any part of the work are appropriately investigated and resolved

Mamadou Ly – Design of the work, Interpretation of data, Revising the work critically for important intellectual content, Final approval of the version to be published, Agree to be accountable for all aspects of the work in ensuring that questions related to the accuracy or integrity of any part of the work are appropriately investigated and resolved

Abdourahmane Ndong – Interpretation of data, Drafting the work, Revising the work critically for important intellectual content, Final approval of the version to be published, Agree to be accountable for all aspects of the work in ensuring that questions related to the accuracy or integrity of any part of the work are appropriately investigated and resolved

Mbaye Thiam – Interpretation of data, Drafting the work, Final approval of the version to be published, Agree to be accountable for all aspects of the work in ensuring that questions related to the accuracy or integrity of any part of the work are appropriately investigated and resolved

Sokhna Ba – Analysis of data, Revising the work critically for important intellectual content, Final approval of the version to be published, Agree to be accountable for all aspects of the work in ensuring that questions related to the accuracy or integrity of any part of the work are appropriately investigated and resolved

Guarantor of Submission

The corresponding author is the guarantor of submission.

Source of Support

None.

Consent Statement

Written informed consent was obtained from the patient for publication of this article.

Conflict of Interest

Authors declare no conflict of interest.

Data Availability

All relevant data are within the paper and its Supporting Information files.

Copyright

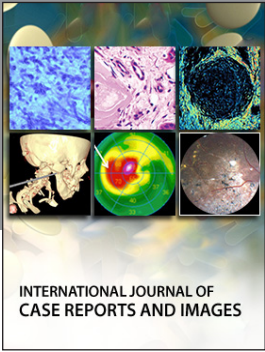
© 2020 Ibrahima Niang et al. This article is distributed under the terms of Creative Commons Attribution License which permits unrestricted use, distribution and reproduction in any medium provided the original author(s) and original publisher are properly credited. Please see the copyright policy on the journal website for more information.

Access full text article on
other devices



Access PDF of article on
other devices





Submit your manuscripts at
www.edoriumjournals.com

