Richter’s hernia: Two observations in the Baka pygmies of Eastern Cameroon

Tsopmene Dongmo Marvin, Nkeck Jan René, Eloundou Ngah Joseph

ABSTRACT

Introduction: Richter’s hernia has a misleading clinical presentation at the onset of the disease due to common lack of obstructive signs whereas there is visceral strangulation. The delay in diagnosis is therefore long leading to high morbidity and mortality in a rural context where access to essential surgical care is limited.

Case Series: We report two cases of Richter’s hernia, discovered intraoperatively in a woman and a man of respectively 24 and 29 years of age. They had direct inguinal hernia with partial incarceration of the distal bowel loop without obstruction. The treatment consisted in both cases in a segmental resection and end to end anastomosis followed by the inguinal ring closure and a parietal repair. The postoperative follow-ups in both cases were unremarkable.

Conclusion: Clinical signs of Richter’s hernia are generally misleading at the onset of pathology and imaging is inconclusive. Therefore, awareness during the clinical examination remains the key for proper diagnosis and timely management, for a good postoperative outcome. The procedure depends on the peroperative findings.

International Journal of Case Reports and Images (IJCRI)

International Journal of Case Reports and Images (IJCRI) is an international, peer reviewed, monthly, open access, online journal, publishing high-quality, articles in all areas of basic medical sciences and clinical specialties.

Aim of IJCRI is to encourage the publication of new information by providing a platform for reporting of unique, unusual and rare cases which enhance understanding of disease process, its diagnosis, management and clinico-pathologic correlations.

IJCRI publishes Review Articles, Case Series, Case Reports, Case in Images, Clinical Images and Letters to Editor.

Website: www.ijcasereportsandimages.com
Richter’s hernia: Two observations in the Baka pygmies of Eastern Cameroon

Tsopmene Dongmo Marvin, Nkeck Jan René, Eloundou Ngah Joseph

ABSTRACT

Introduction: Richter’s hernia has a misleading clinical presentation at the onset of the disease due to common lack of obstructive signs whereas there is visceral strangulation. The delay in diagnosis is therefore long leading to high morbidity and mortality in a rural context where access to essential surgical care is limited.

Case Series: We report two cases of Richter’s hernia, discovered intraoperatively in a woman and a man of respectively 24 and 29 years of age. They had direct inguinal hernia with partial incarceration of the distal bowel loop without obstruction. The treatment consisted in both cases in a segmental resection and end to end anastomosis followed by the inguinal ring closure and a parietal repair. The postoperative follow-ups in both cases were unremarkable.

Conclusion: Clinical signs of Richter’s hernia are generally misleading at the onset of pathology and imaging is inconclusive. Therefore, awareness during the clinical examination remains the key for proper diagnosis and timely management, for a good postoperative outcome.

INTRODUCTION

The first scientific description of the Richter’s hernia was made in 1778 by the German surgeon August Gottlob Richter. It accounts for about 5–15% of strangulated hernias, in which only part of the circumference of the antimesenteric border of the bowel wall is incarcerated within the hernia sac leading to strangulation [1]. The lack of bowel obstruction is the known cause of diagnosis and management delay. A delay in management is associated with a risk of bowel ischemia, gangrene and perforation, leading to high morbidity and mortality.

CASE SERIES

Case 1

A 24-year-old female presented with a three-day history of a painful, non-reducible right inguinal swelling without any sign of bowel obstruction. The diagnosis of
a right inguinal hernia was made. The surgical findings were those of a direct inguinal hernia with 5 cm of the antimesenteric side of the distal ileum incarcerated and gangrenous (Figure 1). A short sub-umbilical median laparotomy allowed mobilization of the incarcerated loop. Resection of the segment of ileum involved was done with ileoileal hand sewn anastomosis followed by a parietal repair. The total duration of hospitalization was 10 days and the postoperative outcome good with a four month follow-up.

Case 2

A 29-year-old male presented with a week history of a right inguinal pain. The patient was ill-looking with a body temperature 38.9°C, heart rate 102 bpm, and blood pressure 99/52 mmHg. In addition, he had an abdominal tenderness in the hypogastric and right iliac fossa regions with a non-reducible inflammatory groin mass. Surgery revealed a strangulated direct inguinal hernia with a gangrenous sac. Following a kelotomy, we performed a resection of the necrotic part of the ileum loop and performed an end-to-end anastomosis. The parietal cure was done according to Shouldice technique. The total duration of hospitalization was seven days and a good outcome following three months postoperative follow-up.

DISCUSSION

Richter’s hernia is the incarceration of part of the circumference of the wall of the antimesenteric side of the loop through a small hernia ring. It was named after its first scientific description by the German surgeon August Gottlieb Richter in 1778 [1]. In the Caucasian subjects, the most frequent localization is the femoral canal (36–88%) followed by the deep inguinal ring (12–36%) [2, 3]. The two cases presented were direct inguinal hernias. This result is similar to that obtained by Wolfgang et al., and other authors who reported a clear predominance of direct inguinal hernias ranging from 78–94% [4–6]. The common use of laparoscopic surgery has led to increase abdominal wall incisional hernias [7]. Richter’s hernia represents in the general population 5–15% of the strangulated hernias [1]. This prevalence is higher in Africa where Hancock et al. reported in a study in Uganda a prevalence of 25% and Wolfgang et al. a prevalence of 81% in Sudan [1, 4]. This discrepancy could be explained on one hand by anatomical particularities, namely the small hernia rings with firm margins and on the other hand the malnutrition responsible for the increased elasticity of the intestinal wall. Kadirov et al. reported a female predominance with 57% of women, while Tomaszewski et al. and Wolfgang et al. reported a female predominance with sex ratio 6.3 and 1.4 respectively [1, 8, 9]. The clinical diagnosis of partial enterocele is not easy, the clinical presentation being misleading at the beginning, marked by an irreducible painful inguinal swelling without bowel obstruction. This bowel strangulation without obstruction would be one of the causes of diagnostic delay hence, a high morbidity and mortality. Medical imaging has a prime role in the diagnosis of Richter’s hernias, particularly with ultrasonography and computed tomography. However, they are generally inconclusive at the onset of the disease [1, 10, 11]. Surgical treatment should be carried out as soon as possible, either by segmental resection with an end to end anastomosis or by extra-mucosal suture invaginating the gangrenous segment (Figure 2). This operative technique proposed by Horbach et al., which avoids bowel resection, is performed only under certain conditions; the gangrenous segment does not extend across more than half the circumference of the gut and its margins are clearly healthy [4].

CONCLUSION

The two cases presented illustrate the picture of the Richter’s hernia whose clinical signs are misleading. In presentation of any groin swelling, the need for an early and accurate diagnosis followed by prompt treatment cannot be overemphasized. The surgical treatment remains in relation with local and parietal conditions.
Acknowledgements
We would like to thank Nsalar Didier for patient management and for taking clinical photograph, and also thank to Ndoadoumgue Aude Laetitia for the translation of the manuscript.

Author Contributions
Tsopmene Dongmo Marvin – Substantial contribution to conception and design, Acquisition of data, Drafting the article, Final approval of the version to be published
Nkeck Jan René – Substantial contribution to conception and design, Revising the article critically for potential intellectual content, Final approval of the version to be published
Eloundou Ngah Joseph – Substantial contribution to conception and design, Revising the article critically for potential intellectual content, Final approval for the version to be published

Guarantor
The corresponding author is the guarantor of submission.

Conflict of Interest
Authors declare no conflict of interest.

Copyright
© 2017 Tsopmene Dongmo Marvin 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.

REFERENCES
1. Steinke W, Zellweger R. Richter’s hernia and Sir Frederick Treves: An original clinical experience, review, and historical overview. Ann Surg 2000 Nov;232(5):710–8.
2. Frankau C. Strangulated hernias: A review of 1487 cases. Br J Surg 1931;19:176–91.
3. Gillespie RW, Glas WN, Mertz GH, Musselman M. Richter’s hernia: Its etiology, recognition and management. AMA Arch Surg 1956 Oct;73(4):590–4.
4. Horbach JM. Invagination for Richter-type strangulated hernias. Trop Doct 1986 Oct;16(4):163–8.
5. Hancock BD. Basoga hernia prevalence in abdominal emergencies in Busoga, Uganda. Trop Geogr Med 1974 Mar;26(1):15–25.
6. Eckhart P. The incidence of strangulated hernia in Busoga, Uganda. East Afr Med J 1964 Feb;41:59–62.
7. Williams MD, Flowers SS, Fenoglio ME, Brown TR. Richter hernia: A rare complication of laparoscopy. Surg Laparosc Endosc 1995 Oct;5(5):419–21.
8. Kadirov S, Sayfan J, Friedman S, Orda R. Richter’s hernia: A surgical pitfall. J Am Coll Surg 1996 Jan;182(1):60–2.
9. Tomaszewski P. Incidence of Richter’s hernia among the population of Nigeria. [Article in Polish]. Wiad Lek 1988 Jul 15;41(14):974–5.
10. Middlebrook MR, Eftekhari F. Sonographic findings in Richter’s hernia. Gastrointest Radiol 1992;17(3):229–30.
11. Baker ME, Ungerlaider R, Cooper C, Dunnick NR. Computed tomography of a traumatic, diaphragmatic, Richter’s hernia: Findings mimicking an abscess. J Comput Tomogr 1988 Jan;12(1):42–4.
Edorium Journals: An introduction

About Edorium Journals
Edorium Journals is a publisher of international, high-quality, open access, scholarly journals covering subjects in basic sciences and clinical specialties and subspecialties.

Invitation for article submission
We sincerely invite you to submit your valuable research for publication to Edorium Journals.

Why should you publish with Edorium Journals?
In less than 10 words: “We give you what no one does”.

Vision of being the best
We have the vision of making our journals the best and the most authoritative journals in their respective specialties. We are working towards this goal every day.

Exceptional services
We care for you, your work and your time. Our efficient, personalized and courteous services are a testimony to this.

Editorial review
All manuscripts submitted to Edorium Journals undergo pre-processing review followed by multiple rounds of stringent editorial reviews.

Peer review
All manuscripts submitted to Edorium Journals undergo anonymous, double-blind, external peer review.

Early view version
Early View version of your manuscript will be published in the journal within 72 hours of final acceptance.

Manuscript status
From submission to publication of your article you will get regular updates about status of your manuscripts.

Our Commitment

Six weeks
We give you our commitment that you will get first decision on your manuscript within six weeks (42 days) of submission. If we fail to honor this commitment by even one day, we will give you a 75% Discount Voucher for your next manuscript.

Four weeks
We give you our commitment that after we receive your page proofs, your manuscript will be published in the journal within 14 days (2 weeks). If we fail to honor this commitment by even one day, we will give you a 75% Discount Voucher for your next manuscript.

Favored author program
One email is all it takes to become our favored author. You will not only get 15% off on all manuscript but also get information and insights about scholarly publishing.

Institutional membership program
Join our Institutional Memberships program and help scholars from your institute make their research accessible to all and save thousands of dollars in publication fees.

Our presence
We have high quality, attractive and easy to read publication format. Our websites are very user friendly and enable you to use the services easily with no hassle.

Something more...
We request you to have a look at our website to know more about us and our services. Please visit: www.edoriumjournals.com

We welcome you to interact with us, share with us, join us and of course publish with us.

Edorium Journals: On Web
Browse Journals

CONNECT WITH US

This page is not a part of the published article. This page is an introduction to Edorium Journals.