International Journal of Surgery Case Reports 110 (2023) 108687

Contents lists available at ScienceDirect

International Journal of Surgery Case Reports

journal homepage: www.elsevier.com/locate/ijscr

Case report

Case report: Incarcerated obturator hernia, initially presenting as right hip pain!

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ARTICLE INFO

Keywords:
Hernia
Obturator
Acute
Incarcerated
Obstructive bowel
Hip pain
Howship-Romberg

ABSTRACT

Introduction: An incarcerated Obturator herniation is a rare external abdominal hernia. Abdominal CT-scanning is the first choice for the diagnosis of such an incarcerated Obturator hernia. Since intestinal incarceration leads to acute necrosis. Therefore emergency surgical treatment is required. However, due to the lack of specificity of the clinical manifestations of incarcerated Obturator hernia, a delay in adequate diagnostics may be higher than expected.

Presentation of case: An 82 year woman was admitted to the hospital because of right hip joint pain. She was initially evaluated and admitted by orthopedics team for suspected arthritis. A CT-scan with contrast was ordered, which showed an intestinal ischemic obstruction in a right sided obturator hernia, an acute laparotomy was carried out.

Discussion: This case is important and differs from the well-known similar cases through the emergency admission at the orthopedic department because of the clear right hip pain and clinical history from the patient. An Obturator herniation (OH) is a rare external abdominal hernia accounting for only 0.07 %–1 % of all hernia cases. Because the female pelvis is wider which can lead to herniation of abdominal contents. The Howship-Romberg sign should be checked during physical examination.

Conclusion: Obturator hernia is very rare and difficult to diagnose. Moreover when elderly women suffer from long-term chronic diseases, a very thin body, or a history of multiple deliveries. Howship-Romberg sign should be checked in these situations during physical examination. Early diagnosis and treatment significantly reduces the occurrence of intestinal perforation, necrosis, sepsis and/or other severe adverse events, thereby, a significant prognostic improvement of patients.

1. Introduction

This case is important and differs from the well-known similar cases through the emergency admission at the orthopedic department because of the clear right hip pain and clinical history from the patient. An Obturator herniation (OH) is a rare external abdominal hernia accounting for only 0.07 %–1 % of all hernia cases [1]. Because the female pelvis is wider which can lead to herniation of abdominal contents [1]. CT-Scanning is the first choice for the diagnosis of an obturator hernia [2]. In this situation we preferred a laparotomy instead of laparoscopy [3] because of the intestinal obstruction with ileus, which is an emergency situation, in an elderly woman with multi-comorbidities. However, due to the lack of specificity of the clinical manifestations of this

Table 1
Last laboratory findings before surgical consultation.

Test	Value	International reference value
C-reactive protein (CRP)	48	<5 mg/L
Hemoglobin (Hb)	10	8.5–11.0 mmol/L
Red blood cell count	4.65	4.3–6.0 × 1012/L
White blood cell count	11	4.0–10.0 × 109/L
Thrombocytes	271	150–400 × 109/L
Sodium	135	135–145 mmol/L
Potassium	3.4	3.5–5.0 mmol/L
Creatinine	70	50–110 μmol/L
Estimated glomerular filtration rate	82	>60 ml/min
Ureum	6.2	2.5–7.5 mmol/L

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https://doi.org/10.1016/j.ijscr.2023.108687
Received 17 July 2023; Received in revised form 9 August 2023; Accepted 9 August 2023
Available online 20 August 2023

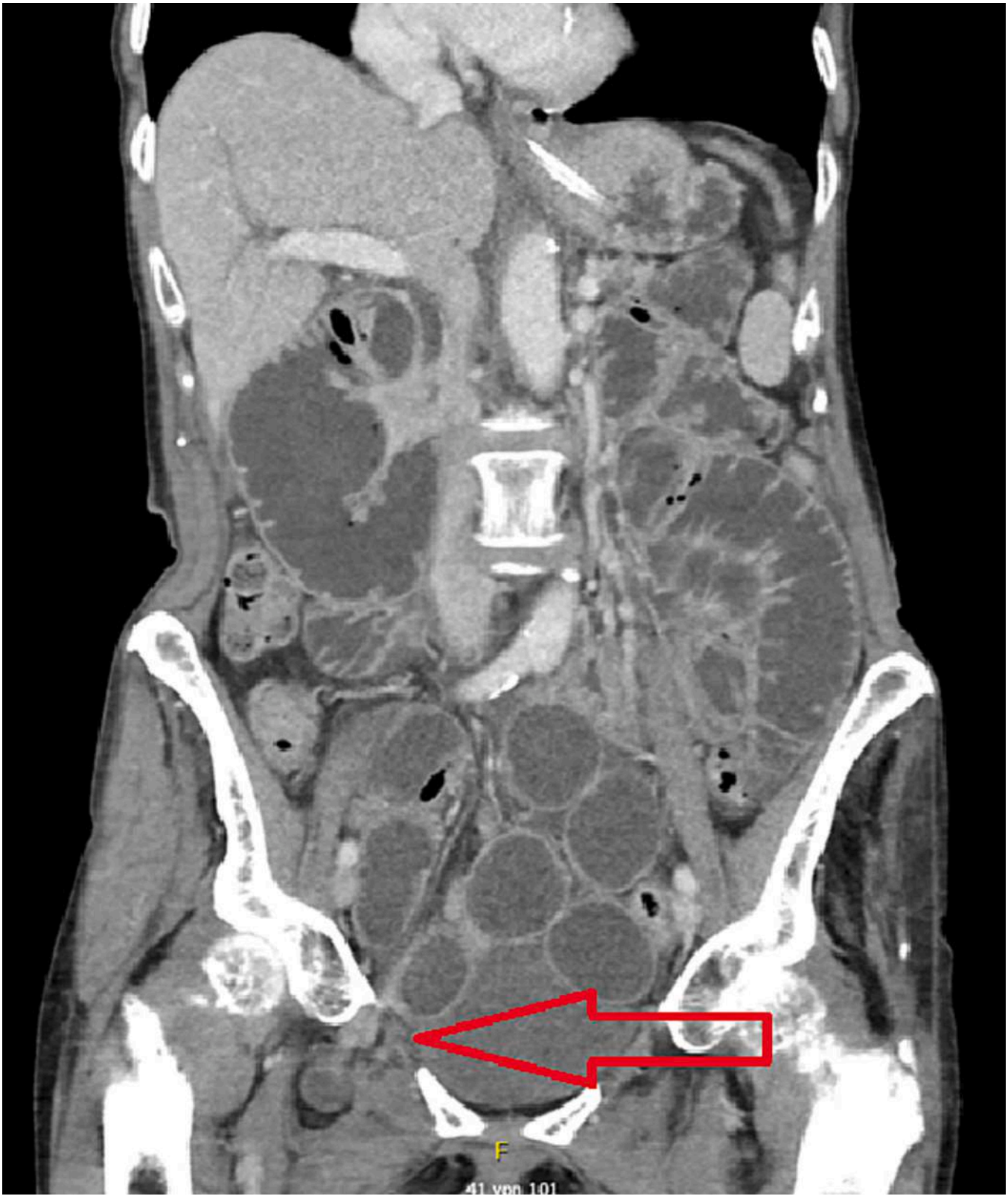

Fig. 1. Coronal overview of the abdominal CT-scan with contrast. A distended bowel is diagnosed and a clearly Obturator hernia is visible with its incarcerated bowel content (arrow).

hernia type, the misdiagnosis-rate may be higher than expected, which may quite often leads to delay in diagnosis and adequate treatment [4]. This case report is written in line with the recommendations of the consensus-based surgical case reporting guideline development (SCARE guidelines) [5].

2. Case presentation

The patient was an 82 year elderly woman who presented at the hospital because of right hip joint pain. Because of this admission by the orthopedic surgeons with a suspected arthritis, she had been treated

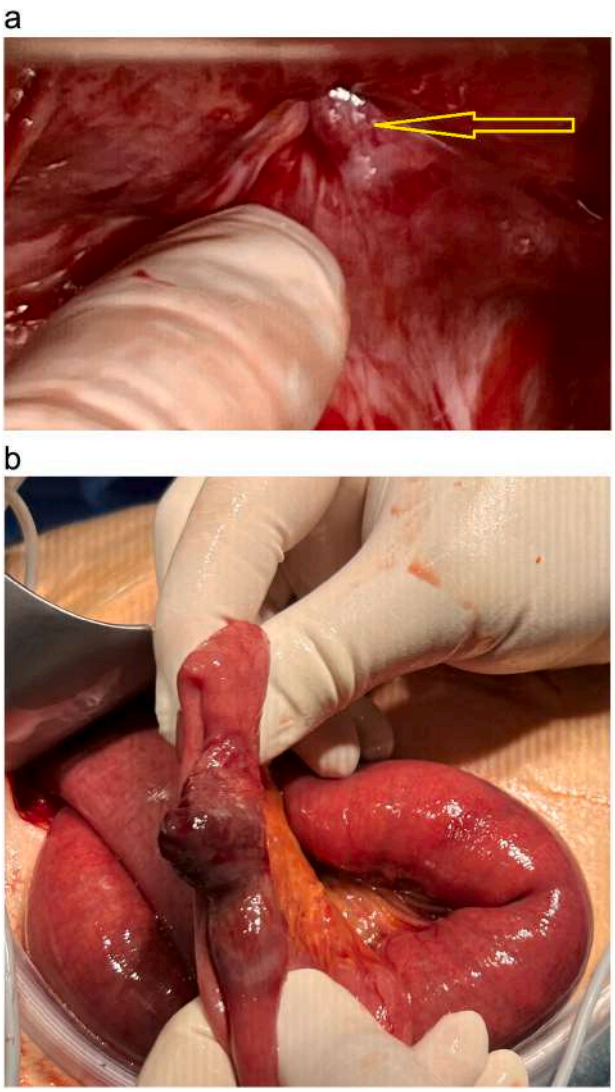

Fig. 2. A. In open approach the Obturator hernia is clearly visible.
B. Ischemic Ileum bowel segment with perforation.

with analgesics, rest. Radiological examination had not shown any fracture nor arthritis. On the third admission day she developed progressive abdominal pain and abdominal distension with nausea, vomiting of food and bile, and constipation symptoms. The patient was presented to us because of these clinical signs. Clinical examination resulted in the diagnose of an Ileus but without a clear cause. Her relevant baseline characteristics can be summarized as ASA-Classification III (American Society of Anesthesiologists) [6]. Laboratory findings are presented in Table 1. No history of allergies nor the abuse of medication was known.

A CT-scan (Computer Tomography) with contrast was ordered rapidly, which showed the intestinal obstruction in a right sided Obturator hernia. Further CT-scan findings of the entire abdomen and pelvis showed that the small intestinal wall on the right side of the pelvic cavity was thickened, with mild and uneven enhancement. Some of the intestines in the upper segment were dilated, while others showed an accumulation of gas and effusion. The corresponding intestinal wall was thickened. This finding was consistent with a small intestinal obstruction or Obturator hernia (Fig. 1).

Because of the emergency situation, age of the patient and the CT-scan findings we decided to a lower midline laparotomy instead of laparoscopy.

The proximal intestine was dilated, the incarcerated intestinal wall was congested and edematous, a 10-cm-diameter section of ischemic necrotic tissue was detected with a necrotic perforation of about 1 cm areal (Fig. 2A and B).

Partial resection of ileum segment and End-to-End-Anastomosis had been done.

Furthermore, primary closure of the Hernial defect was performed using a Prolene 2.0 suture. Thus: without a mesh because the risk of infection. Antibiotic-therapy (Ampicilline/Sulbactam 3Gr. 3 times daily for 5 days) and rehydration were administered postoperatively because of the sepsis symptoms.

Oral nutrition, because of the need for rehydration and substitution of electrolytes and calories, was tolerated meaning slowly starting from the second post-operative day. Our patient was discharged on the 10th post-operative day, uneventful, and in good condition. No abnormalities were found during the follow-up visit after two weeks (Fig. 3). The abdomen and its wall were all in good condition.

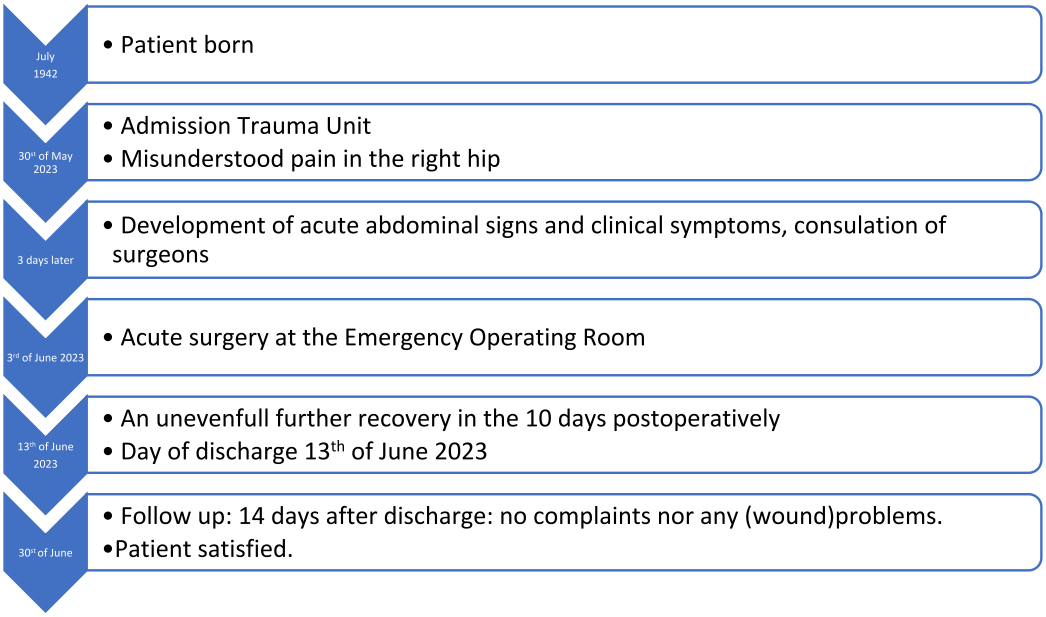

Fig. 3. Timeline of the case report.

3. Discussion

Most of the OH-patients are coming without a clear clinical manifestation and medical history. In our case the patient even came with a right-sided hip joint pain.

The Howship-Romberg sign should therefore be checked during physical examination. This sign is defined as an indication of obturator nerve irritation resulting in inner thigh pain that may extend to the knee on internal rotation of the hip [7].

The obturator nerve enters the obturator canal above the accompanying arteries and veins, and passes through the obturator canal. It was divided into anterior and posterior segments to innervate the adductor muscle group and the ipsilateral hip and knee joints, respectively [1].

Obturator hernia is highly prevalent in women due to their wider pelvis, larger triangular obturator and larger transverse diameter. A hernia forms easily when the pelvic floor muscles and fascia are weak and relaxed [8]. Older, frail, and emaciated women who have undergone multiple pregnancies and childbirth may develop OH, which has thus been called “little old lady hernia” [9].

4. Conclusions and recommendations

An Obturator hernia is rare and difficult to diagnose especially when mimicking hip pain. The Howship-Romberg sign should therefore be checked during physical examination. Abdominal CT-scan is the first choice for imaging examination. When diagnosed with an ischemic small bowel obstruction an acute laparotomy should be performed to relieve obstruction and repair defects. Early diagnosis and treatment significantly reduces the occurrence of intestinal necrosis, perforation, sepsis and other severe adverse events, thereby prognostic improvement of patients.

Funding, ethical statement and informed consent

No funding for this study. Medical Ethical permission for this case report was not required after consultation of the Ärztekammer, Hannover, Germany. Our patient gave her full permission to use data and photographs for a case report and education.

Conflict of interest

The authors declare that the research was conducted in the absence of any commercial or financial relationships that could be construed as a potential conflict of interest.

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