



Case report

Incarcerated right inguinal hernia containing sigmoid colon: An unusual case report

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ABSTRACT

Introduction: Incarcerated inguinal hernia is an irreducible but the blood supply to the contained part is intact, but developing towards strangulation. Diagnosis usually made by physical examination. The content of hernia sac may vary. The usual finding is a segment of small intestine and less commonly large intestine. Except in sliding hernia, the sigmoid colon is not common in inguinal hernia, especially on the right side.

Case report: We report a rare case of an incarcerated right side inguinal hernia containing the sigmoid colon of a 65-year old male, diagnosed with physical examination and abdominal ultrasonography. This patient treated by reducing the content of hernia sac and herniorrhaphy in general surgery ward of Aliabad Teaching Hospital.

Discussion: Inguinal hernia is the commonest of all groin hernia. Incarcerated inguinal hernia can lead to intestinal obstruction, strangulation and infarction. The content of inguinal hernia varies widely. In our case, the content of hernia sac was the incarcerated loop of sigmoid colon. The sigmoid colon is commonly found to herniate at the left inguinal region, but as a content of a right side inguinal hernia is rare.

Conclusion: The sigmoid colon as a content of a right side inguinal hernia is rare. Mesh repair has always been a subject of debate due to increased risk of mesh infection rates. Many patients present complications due to delayed elective repair of inguinal hernia.

1. Introduction

Protrusion of any viscus (covered by a peritoneal sac) through the inguinal region of abdominal wall is known as inguinal hernia. Inguinal hernia is the most common hernia (73%) because the muscular anatomy in the inguinal region is weak and also due to the presence of natural weakness like deep ring and cord structures. Indirect is more common than direct [1]. The content of the hernia sac may vary from a piece of omentum to small or large intestine; ilium being commonest. Other abdominal viscera may rarely be involved, like appendix, stomach, Meckel diverticulum etc. On the right side, caecum, appendix, ascending colon are involved and on the left side, sigmoid colon. However, it may sometime contain an unusual content that affects surgical management [2,3].

Inguinal hernias are repaired mainly to relieve symptoms like pain and reduce the risk of acute incarceration/strangulation. Strangulation hernias are described in which the blood supply to the contained part has been impeded, or cut off usually by a constriction, or band intrinsic to the hernia itself. Incarcerate hernia is an irreducible hernia but the blood supply to the contained part is intact [4]. Here the lumen of the

portion of colon occupying a hernia sac is blocked with faeces [1]. About 10% of inguinal hernias become incarcerated, causing strangulation, bowel obstruction or infarction [5]. We present an unusual case of an incarcerated right side inguinal hernia containing the sigmoid colon. Written informed consent was obtained from the patient to publish this case report, including any accompanying images. A copy of the written consent is available for review by the Editor-in-Chief of this journal on request. This case has been reported in line with the SCARE Criteria 2020 [6]. The research was registered ([ClinicalTrials.gov](https://clinicaltrials.gov) identifier: NCT05251350).

2. Case report

A 65-year-old male was admitted to our emergency department with complaints of pain and inability to reduce a right side inguinal hernia that had started 48 h before. The patient had been present reducible hernia since 4 years. There was a previous history of surgery for left side inguinal hernia 5 years ago. On examination, the abdomen of patient was soft, non-tender with sluggish bowel sounds. In the right inguinal area, there was a large incomplete irreducible hernia, tender on

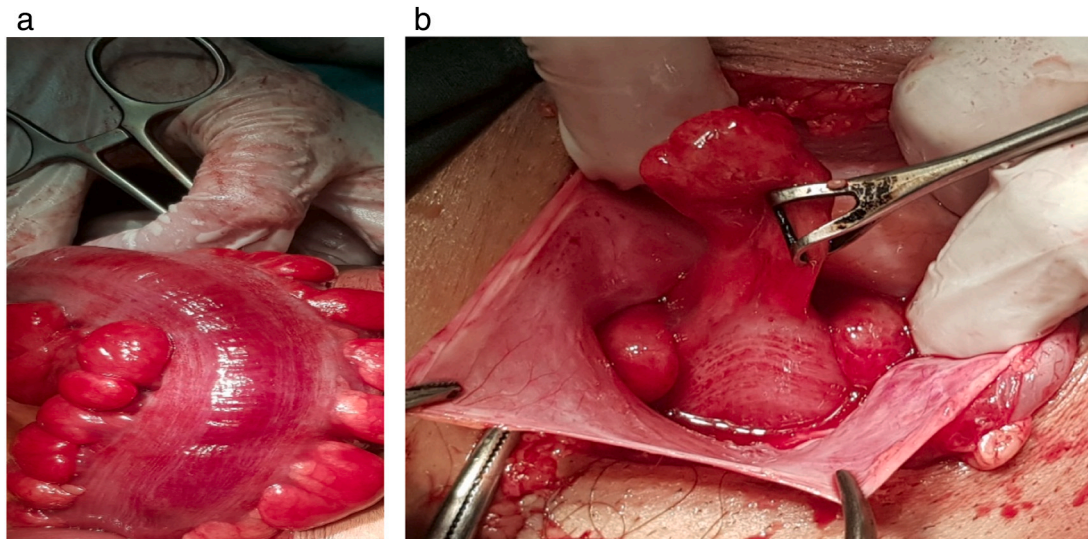
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Figs. 1 and 2. Hernial sac containing sigmoid colon as content in the right side of inguinal region.

palpation and it had feeble gurgling sound on auscultation. An abdominal ultrasound was done, which showed the hernia sac containing bowel loops with reduced peristalsis. The patient was posted for emergency exploration of the inguinal region. Intraoperatively, the hernia sac was found to contain an edematous bowel loop with appendices epiploica, which was identified as redundant sigmoid colon [Figs. 1 and 2]. The content of hernia was reduced and right inguinal herniorrhaphy (Bassini repair) was done by me in general surgery ward of Aliabad Teaching Hospital. The patient discharged on third postoperative day in satisfactory condition. The patient was followed for two weeks after surgery and there were no signs of recurrence or infection at the final follow-up.

3. Discussion

Inguinal hernias are relatively common in the elderly with an estimated prevalence 6%. Incarceration of inguinal hernia occurs in approximately 10% of cases which in turn can lead to intestinal obstruction, strangulation and infarction. Among these complications, strangulation is the most serious with potentially lethal sequelae. The content of inguinal hernia varies widely. In most cases the small intestine and omentum usually contained in the hernia sac. But an ovulating ovary, liposarcoma of the spermatic cord, spermatic cord hematoma, pancreatic pseudocyst, blood from a ruptured spleen, and splenic gonadal fusion in child have also been reported. Inguinal hernia sac in 0.5% of cases contains malignancies either of saccular origin or generating from the herniated organ, usually sigmoid, caecum, and other parts of colon [7].

In our case, the content of hernia sac was the incarcerated loop of sigmoid colon probably due to redundancy. Due to anatomical considerations, the sigmoid colon is commonly found to herniate through abdominal defects at the left inguinal region, especially as a sliding hernia. The sigmoid colon as a content of a right side inguinal hernia is rare.

The content of hernia was reduced and right inguinal herniorrhaphy (Bassini repair) was done. In incarcerated inguinal hernias, it is important to assess the hernia content viability. Mesh repair in situations of incarcerated inguinal hernia has always been a subject of debate due to increased risk of mesh infection rates [4]. Tension free repairs have gained popularity worldwide for elective as well as complicated inguinal hernia repairs.

Inguinal hernia is a common clinical condition that usually has limited differential diagnosis spectrum and its repair is simple in the

hands of experienced surgeon. In rare cases though, hernias may pose a great surprise, not only due to their content but also for difficulty in management. Despite universal acceptance of the value of elective hernia repair, many patients present with incarceration or strangulation, which are associated with significant morbidity and mortality, so elective repair of inguinal hernia should be done whenever possible [2].

4. Conclusion

Inguinal hernia is a common clinical condition. Many patients present complications such as incarceration or strangulation due to delayed elective repair of inguinal hernia. An incarcerated right side inguinal hernia containing the sigmoid colon is rare. Mesh repair in situations of incarcerated inguinal hernia has always been a subject of debate due to increased risk of mesh infection rates.

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Ethical approval

Ethical approval was given by the scientific committee of the Research Department of Kabul University of Medical sciences.

Consent

Written informed consent was obtained from the patient to publish this case report, including any accompanying images. A copy of the written consent is available for review by the Editor-in-Chief of this journal on request.

Guarantor

I accept full responsibility for the work, had access to the data and made decision to publish.

Registration of research studies

[ClinicalTrials.gov](https://clinicaltrials.gov) Identifier: NCT05251350

Provenance and peer review

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CRediT authorship contribution statement

This study done by me, completely.

Declaration of competing interest

None declared.

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