



## Irreducible Right Inguinal Hernia containing Sigmoid Colon as content -A Rare Case Report

Authors

**Dr Rohit Verma<sup>1</sup>, Dr Shelja Rawat<sup>2</sup>, Dr Irshan Mohammad<sup>3</sup>, Dr Rohit Kumar<sup>4\*</sup>**

<sup>1</sup>MD Dermatology, MO Specialist, CH Kangra (HP)

<sup>2</sup>MD Biochemistry, MO Specialist, CH Kangra (HP)

<sup>3</sup>Junior Resident, Department of Surgery, Dr RPGMC Kangra at Tanda (HP)

<sup>4</sup>MS General Surgery, Senior Resident, Department of Surgery, Dr RPGMC Kangra at Tanda (HP)

\*Corresponding Author

**Dr Rohit Kumar**

MS General Surgery, Senior Resident, Department of Surgery, Dr RPGMC Kangra at Tanda (HP)

### Abstract

*Inguinal hernia is a common diagnosis in patients presenting with a painless and reducible groin swelling. Cough impulse and reducibility are the cardinal signs of inguinal hernia but both are absent in case of irreducible, obstructed and strangulated hernia. Although the diagnosis is usually made by physical examination, the content of the hernia sac and the extent of the following operation may vary. The usual finding is omentum, segment of small bowel and less commonly large bowel. Except in sliding hernia, the sigmoid colon is uncommonly found in an inguinal hernia, especially on the right side. We present an extremely rare case of an irreducible right inguinal hernia containing the sigmoid colon as content.*

**Keywords** – Case report, Inguinal hernia, Sigmoid colon, Irreducible hernia.

### Introduction

Inguinal hernia is defined as the protrusion of any viscus (covered by a peritoneal sac) through the inguinal region of abdominal wall. Inguinal hernia is common entity is surgical patients having 4% prevalence for adults >45 years of age <sup>[1]</sup>. Inguinal hernia is the most common hernia (73%) among all the hernias due to the presence of natural weakness like deep ring and cord structures. Anatomically hernia can be direct or indirect based on site of exit either from the deep or superficial ring. Indirect hernia is more common than direct <sup>[2]</sup>. Based on position it can be

bubenocele, incomplete and complete inguinal hernia. Based on content it can be omentocele, enterocele and vesicocele. 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 is most commonly involved. Clinically inguinal hernia can be reducible, irreducible, obstructed, strangulated, and inflamed hernia.

Strangulation hernias present when the blood supply to the contained part is compromised. Incarcerated hernia is an irreducible hernia but the

blood supply to the contained part is intact<sup>[3]</sup>. About 10% of inguinal hernias become incarcerated, causing strangulation, bowel obstruction or infarction<sup>[4]</sup>. Although the diagnosis is usually made by physical examination, the content of the hernial sac and the extent of the operation found only at the time of surgery. Mesh hernioplasty is the gold standard treatment for inguinal hernia but in case of strangulated hernia or gut gangrene, herniorrhaphy is recommended. We present a rare case of a right-side inguinal hernia containing the sigmoid colon as content.

### Case Report

45 years old male patient presented in the emergency department at DRPGMC Tanda with complaints of irreducible swelling in the right inguinal region for 24 hours. Swelling was associated with dragging pain in right inguinal region. Patient was a known case of right inguinal hernia for last 3 years but previously hernia used to appear only on coughing, sneezing and after doing heavy exercises. Patient had history of left sided inguinal hernia repair 5 years back. On abdominal examination, patient's abdomen was soft, non-tender, bowel sounds were present. In the right inguinal region, there was a large irreducible swelling reaching up to the root of scrotum, non-tender on palpation and it had feeble gurgling sounds on auscultation [figure-1].



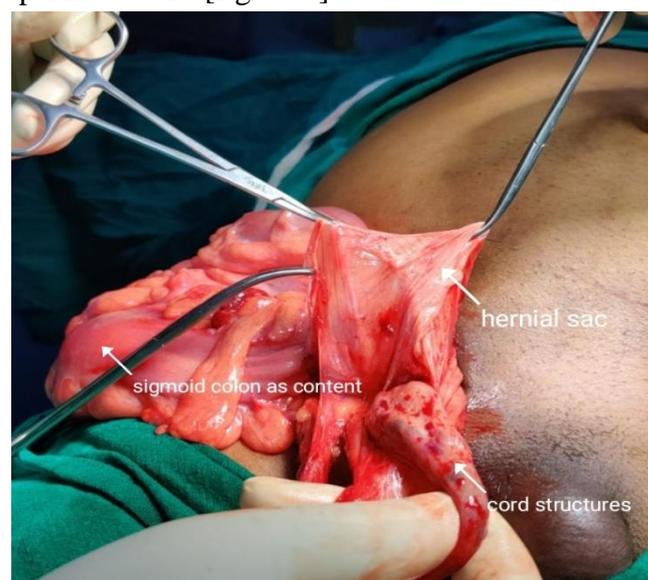
**Figure 1** – local examination showing complete inguinal hernia reaching up to root of scrotum

Chest x-ray was normal. They were no evidence of air fluid levels on x-ray abdomen. Ultrasound Abdomen showed the hernial sac containing bowel loops with reduced peristalsis. The patient was diagnosed with right irreducible, complete inguinal hernia and planned for emergency surgery in view of bowel loops as content as there are chances of obstruction and strangulation. Intraoperatively indirect hernial sac was present containing sigmoid colon as content [figure-2].



**Figure 2** – photograph showing indirect hernial sac after opening sheath

There was no signs of obstruction and strangulation. Hernial sac separated from the spermatic cord [figure-3].



**Figure 3** – intra op photograph showing spermatic cord and hernial sac containing sigmoid colon

Hernial content (sigmoid colon) reduced into the peritoneal cavity [figure-4].



**Figure 4** – intra op photograph showing hernial sac after reduction of content into peritoneal cavity

Sac transfixed at the level of deep inguinal ring. Lichtenstein tension free mesh hernioplasty was performed. Post operative period was uneventful and patient discharged on 2<sup>nd</sup> POD.

### Discussion

Inguinal hernias are relatively common in the elderly with an estimated prevalence 6%<sup>[5]</sup>. Complications occur in approximately 10% of cases which in turn can lead to intestinal obstruction, strangulation, and infarction<sup>[6]</sup>. Among all complications, strangulation is the most serious complication with potentially lethal sequelae leading to patient mortality<sup>[7]</sup>. In most cases, the small intestine and omentum are usual contents of hernial sac, but an ovulating ovary, liposarcoma of the spermatic cord<sup>[8]</sup>, spermatic cord hematoma, pancreatic pseudocyst, blood from a ruptured spleen<sup>[9]</sup>, and splenic gonadal fusion in a child have also been reported. Inguinal hernia sacs in 0.5% of cases contain malignancies either of sacular origin or generating from the herniated organ, usually sigmoid, caecum, and other parts of colon<sup>[10]</sup>.

In our case, the content of hernial sac was the loop of sigmoid colon may be 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 and unusual. We performed mesh hernioplasty as there was no evidence of strangulation or gut gangrene. In case of strangulation, herniorrhaphy is generally recommended because there are chances of mesh infection after mesh hernioplasty.

Inguinal hernia is a common clinical condition encountered during surgical practice 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 in emergency which are associated with significant morbidity and mortality, so elective repair of inguinal hernia should be done whenever possible.

### Conclusion

Inguinal hernia is a common clinical condition. Many patients present with complications such as obstruction or strangulation due to delayed elective surgery of inguinal hernia. A right-side inguinal hernia containing the sigmoid colon is rare and unusual presentation. Mesh hernioplasty in situations of strangulated inguinal hernia is not recommended due to increased risk of mesh infection rates. Elective repair of inguinal hernia should be done whenever possible as complications of inguinal hernia has significant morbidity and mortality.

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**References**

1. Jenkins, J.T.; O'dwyer, P.J. Inguinal hernias. *BMJ* 2008, 336, 269–272. [CrossRef] [PubMed]
2. A. Mahjan, Anil luther., Incarcerated right inguinal hernia containing sigmoid colon, *CHRISMED J Heath Res.* (2014) 281–282.
3. Pradeep Chowbey, Davide Lomanto, *Techniques of Abdominal Wall Hernia Repair*, Springer, India, 2020.
4. Rozhl Chir, Carcinoma of the sigmoid colon in an incarcerated inguinal hernia, *PMID.* 93 (11) (2014) 554–556.
5. Slater R, Amatya U, Shorthouse AJ. Colonic carcinoma presenting as strangulated inguinal hernia: Report of two cases and review of the literature. *Tech Coloproctol*2008; 12:255-8.
6. McFadyen BV Jr, Mathis CR. Inguinal herniorraphy: Complications and recurrences. *Semin LaparoscSurg*1994; 1:128-40.
7. Gallegos NC, Dawson J, Jarvis M, Hobsely M. Risk of strangulation in groin hernias. *Br J Surg*1991; 78:1171-3.
8. Hassan JM, Quisling SV, Melvin WV, Sharp KW. Liposarcoma of the spermatic cord masquerading as in incarcerated inguinal hernia. *Am Surg*2003; 69:163-5
9. Sherman HF. The inguinal hernia: Not always straightforward, not always a hernia. *J Emerg Med* 1989; 7:21-4
10. Boormans JL, Hesp WL, Teune TM, Plaisier PW. Carcinoma of the sigmoid presenting as a right inguinal hernia. *Hernia* 2006; 10:93-6.