

**Obstructed inguinal hernia with gist of ileum as content rare presentation - A case report**

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**Conflicts of Interest:** Nil

**Abstract**

**Background:** Primary benign and malignant neoplasm of small bowel are rare and neoplasm of small intestine presenting as content of Obstructed hernia is even rare. Malignant tumour often present late symptoms resulting in a poor prognosis. Careful examination of hernial sac contents is important for correct diagnosis and treatment.

**Case presentation:** A 56-year-old male a known case of COPD, chronic smoker and right inguinal hernia since last 10 years presented with complaints of pain and distension of abdomen associated with vomiting since 3 days. Clinical examination revealed Right Irreducible Obstructed Inguinal hernia with bowel loops as content. Erect X ray abdomen showed multiple air fluid levels, serum potassium levels were low with normal TLC.

**Dianosis:** Right sided obstructed inguinal hernia.

**Intervention:** The case was posted as emergency after resuscitation and correction of fluid and electrolytes abnormalities. Per-operatively, when hernial sac was

opened, a growth was seen in distal third of ileum trapped by narrow neck of sac and compressing proximal small intestine. A resection and anastomosis was done hernia was repaired without mesh. The HPR came as GIST of ileum and resection margins were negative. Post-operative recovery was uneventful and patient received chemotherapy with Imatinib.

**Conclusion:** In patient with obstructed inguinal hernia, while releasing the obstruction it is important to carefully examine the trapped bowel to rule out intestinal growth which may otherwise be missed leading to delayed diagnosis and poor prognosis to the patient.

**Keyword:** inguinal, Gastrointestinal, chemotherapy

**Introduction**

Primary benign and malignant neoplasm of small bowel are rare and neoplasm of small intestine presenting as content of Obstructed hernia is even rare. Malignant tumour often present late symptoms resulting in a poor prognosis. Careful examination of hernial sac contents is

important for correct diagnosis and treatment. Gastrointestinal stromal tumors (GISTs) are rare neoplasms of the gastrointestinal tract associated with high rates of malignant transformation. Most GISTs present asymptotically. Gastrointestinal stromal tumors (GISTs) were originally believed to have originated from the mesenchymal cells of the gastrointestinal tract (GIT) [1,2]. Kindblom and associates in 1998 found that these tumors actually originate from the interstitial cells of Cajal [3]. Hirota and colleagues discovered that these tumors express CD117 antigen (C-Kit), a gain of function mutation responsible for activating the growth of these tumors [4]. GISTs are rare, accounting for 1% to 2% of gastrointestinal neoplasms with higher rate of malignant transformation [5]. The small intestine contains over 90% of the mucosal surface area of the gastrointestinal tract but only 1.1% to 2.4% of all gastrointestinal malignancies. A defining feature of GISTs is their gain of function mutation of proto-oncogene KIT, a receptor tyrosine kinase. The small intestine is the second most common site of GIST tumours after the stomach, containing 25% to 35% of GISTs. GISTs have a greater propensity to be associated with overt hemorrhage than the other small-intestinal malignancies. The recurrence rate following resection of GISTs averages 35%. The 5-year survival rate following surgical resection has been reported to range from 35% to 60% [6]. Clinical trials have shown that 80% of patients with unresectable or metastatic GISTs derive clinical benefit from the administration of Imatinib, with 50% to 60% having objective evidence of reduction in tumor volume. [7]

#### **Presentation of case**

A 56-year-old male came with complaints of pain and distension of abdomen associated with vomiting since 3

days. He is a known case of right inguinal hernia since last 10 years which was earlier reducible had become irreducible since past 3 days. He had not undergone surgery previously due to monetary constraints. He was also a known case of COPD and a chronic smoker. Clinical examination revealed an Obstructed inguinal hernia, Erect X ray abdomen showed multiple air fluid levels, serum potassium levels were low. All routine blood investigations including TLC were normal. The case was posted as emergency after resuscitation and correction of fluid and electrolytes abnormalities. Per-operatively, when hernial sac was opened, a growth was seen in distal third of ileum trapped by narrow neck of sac and compressing proximal small intestine. A resection anastomosis was done through same incision as his respiratory system was bad and a known case of COPD and chronic smoker. A drain was kept and hernia was repaired without mesh as we did not want the mesh to get infected in case of leak from anastomotic site.

The HPR came as GIST of ileum and resection margins were negative. Post-operative recovery was uneventful and he also received chemotherapy with Imatinib. We believe this is the first description of obstructed inguinal hernia as initial presentation of GIST. It is possible that a part of GIST prolapsed into the hernial sac and was trapped by narrow neck of the sac.

#### **Discussion**

Primary neoplasm of the small bowel are quite uncommon, representing only about 3% of all neoplasm of digestive tract, although the small bowel accounts for more than 90% of intestinal mucosal surface and neoplasm of small intestine presenting as content of Obstructed inguinal hernia is even rarer. In patient with obstructed inguinal hernia, while releasing the obstruction it is important to carefully examine the

trapped bowel to rule out intestinal growth which may otherwise be missed leading to delayed diagnosis and poor prognosis to the patient [5].

GIST are defined as spindle cell, epithelioid or occasionally pleomorphic mesenchymal tumours of gastrointestinal tract, which expresses the KIT protein (CD 117 stem cell factor receptor) detected as immunohistochemistry [6-7].

Symptoms including gastrointestinal haemorrhage, often with acute episode of abdominal pain, a mass, weight loss, nausea and vomiting. Small bowel obstruction is reported in 30% of cases but account less than 10% of presentation in most of the reports. This may be due to the fact a large number of tumours are as in this case are predominantly extraluminal and therefore less likely to cause an obstruction.[7]

Treatment includes resection and anastomosis followed by chemotherapy with Imatinib Mesylate.

### Conclusion

In patient with obstructed inguinal hernia, while releasing the obstruction it is important to carefully examine the trapped bowel to rule out intestinal growth which may otherwise be missed leading to delayed diagnosis and poor prognosis to the patient.

### References

1. Mazur MT, Clark HB. Gastric stromal tumors. Reappraisal of histogenesis. *Am J Surg Pathol* 1983; 7:507-19. 10.1097/00000478-198309000-00001.
2. Ram Mohan A, Sathyanesan J, Rajendran K, et al. A gist of gastrointestinal stromal tumors: A review. *World J Gastrointest Oncol* 2013; 5:102-12. 10.4251/wjgo.v5.i6.102
3. Kindblom LG, Remotti HE, Aldenborg F, et al. Gastrointestinal pacemaker cell tumor (GIPACT): gastrointestinal stromal tumors show phenotypic

characteristics of the interstitial cells of Cajal. *Am J Pathol* 1998; 152:1259-69.

4. Hirota S, Is Ozaki K, Moriyama Y, et al. Gain-of-function mutations of c-kit in human gastrointestinal stromal tumors. *Science* 1998; 279:577-80. 10.1126/science.279.5350.577
5. Beltran MA, Cruces KS. Primary tumors of jejunum and ileum as a cause of intestinal obstruction: a case control study. *Int J Surg* 2007; 5:183-91. 10.1016/j.ijsu.2006.05.006
6. Yuan Y, Ding L, Tan M, Han AJ, Zhang X. A concealed inguinal presentation of a gastrointestinal stromal tumor (GIST): a case report and literature review. *BMC Surg.* 2021 Mar 3;21 (1): 111. doi: 10.1186 / s12893 – 021 -01088 - 4. PMID: 3365 8035; PMCID: PMC 793 1599.
7. Brunicaudi, F. C. (2019). *Schwartz's principles of surgery (Eleventh edition.)*. New York: McGraw-Hill
8. Judson I, Demetri G. Advances in the treatment of gastrointestinal stromal tumors. *Ann Oncol.*2007;18: S20-S24