

# Laparoscopic Management of a Proximal Small Bowel Intussusception Secondary to a Rare Benign Neoplasm: A Case Report with Review of Literature

Sparsha Agrawal<sup>1</sup>, Abhinav Agrawal<sup>2</sup>, Prashant Darakh<sup>3</sup>

## ABSTRACT

**Introduction:** Intussusception in adults is a rare entity in which there is telescoping of proximal bowel (intussusceptum) into the lumen of adjacent distal segment (intussuscepiens). Although a leading cause of intestinal obstruction in children, intussusception accounts for <1% of all adult intestinal obstructions.

**Case report:** We report a case of a 36-year lady who presented to us with recurrent colicky abdominal pain, nausea and vomiting for 5 months. CT scan and double balloon enteroscopy showed a polypoid mass in jejunal lumen. Patient underwent a laparoscopy which showed a jejuno-jejunal intussusception associated with jejunal mass for which resection and primary anastomosis was done.

**Conclusion:** It presents with acute, chronic or intermittent nonspecific symptoms thus making its diagnosis a challenge.

**Keywords:** Laparoscopic Management, Proximal Small Bowel Intussusception, Secondary to a Rare Benign Neoplasm

## INTRODUCTION

Intussusception in adults is a rare entity in which there is telescoping of proximal bowel (intussusceptum) into the lumen of adjacent distal segment (intussuscepiens). Although a leading cause of intestinal obstruction in children, intussusception accounts for <1% of all adult intestinal obstructions. It presents with acute, chronic or intermittent non-specific symptoms thus making its diagnosis a challenge. Herein we present a case of intussusception which was diagnosed and treated laparoscopically.

## CASE REPORT

A 36-year-old lady presented with episodic recurrent colicky abdominal pain, associated with nausea and vomiting for five months. The episodes of pain were self-limiting without any intervention. There was no history of jaundice, hematemesis, melena. There was no history of any urinary complaints. On examination, the patient was pale. The vitals were stable: Pulse-82/minute, BP-112/66 mm Hg, respiratory rate- 14/minute and patient was afebrile. The abdomen was soft and without any lump or features of peritonitis. However, the bowel sounds were exaggerated.

Blood investigation revealed anaemia (Hemoglobin-8.6g%). Rest blood investigations were normal.

Plain X-ray of abdomen in erect posture revealed no evidence of intestinal obstruction. Ultrasonography showed segmental small bowel thickening with partial luminal obstruction. Abdominal Contrast enhanced CT (CECT) was done (Figure

1) which showed dilation of proximal jejunal loops with a 4 X 5 cm mass in proximal jejunum with circumferential wall thickening. There was adjacent fat stranding present but there was no lymphadenopathy or free fluid. To visualize and diagnose this lesion a Double Balloon Enteroscopy (DBE) with biopsy was done. It showed a large ulcerated polypoid growth in proximal jejunum 50 cm distal to the ligament of Trietz (Figure 2). The biopsy report showed it to be a leiomyoma.

A preoperative diagnosis of recurrent intestinal obstruction due to a jejunal leiomyoma was made and patient was taken up for laparoscopic excision of mass and primary anastomosis. Intraoperatively there was a jejuno-jejunal intussusception (Figure 3). As the diagnosis was known and it was a benign lesion, gentle reduction was attempted. Subsequently excision with primary anastomosis was carried



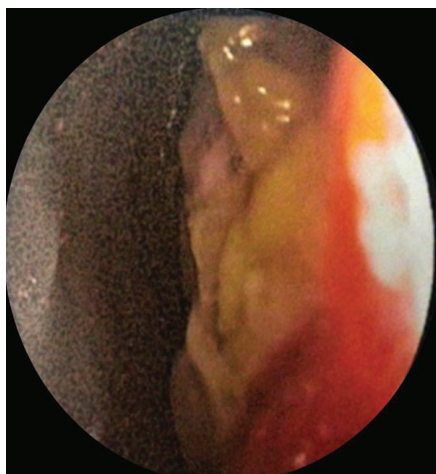
**Figure-1:** Contrast enhanced CT (CECT) of abdomen showing a small bowel loops with a small bowel mass

<sup>1</sup>PG, Department of Gynaecology and Obstetrics, Maulana Azad Medical College, New Delhi, <sup>2</sup>PG, Department of Urology, <sup>3</sup>Assistant Professor, Department of Urology, MGM Medical College, MGM Medical College, Aurangabad, India

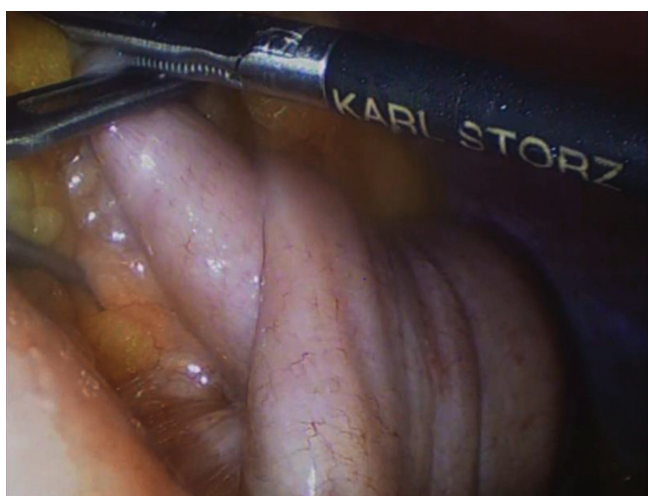
**Corresponding author:** Abhinav Agrawal, 4, Dasna Road, Near Maliwara Chowk, Ghaziabad -201001, India

**How to cite this article:** Sparsha Agrawal, Abhinav Agrawal, Prashant Darakh. Laparoscopic Management of a proximal small bowel intussusception secondary to a rare benign neoplasm: a case report with review of literature. International Journal of Contemporary Medical Research 2018;5(7):G1-G3.

**DOI:** <http://dx.doi.org/10.21276/ijcmr.2018.5.7.1>



**Figure-2:** Double balloon enteroscopy showing a ulcerated polypoid growth



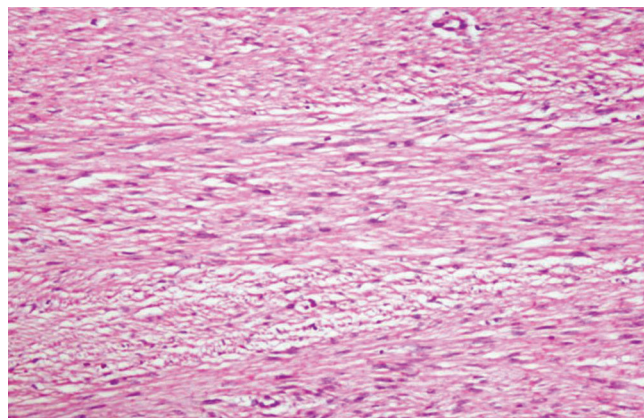
**Figure-3:** Intraoperative picture showing jejuno-jejunal intussusception



**Figure-4:** Figure showing the specimen with an intra-luminal polypoidal growth

out (Figure 4).

Postoperatively the patient convalesced well and was discharged on the fifth post-operative day. Histopathology revealed a leiomyomatous polyp (Figure-5) with CD 117-negative, SMA-positive, Desmin-negative.



**Figure-5:** Histopathology (Hematoxylin-Eosin) showing smooth muscle cells of leiomyoma

## DISCUSSION

Intussusception is a condition in which there is telescoping a part of proximal bowel (intussusceptum) into the lumen of the adjacent distal segment (intussusciens). Intussusception is the most common cause of intestinal obstruction in children. Intussusception is a rare entity in adults and represents 1% of intestinal obstructions and only 0.003% to 0.02% of all hospital admissions.<sup>1</sup> The presentation of adult intussusception can be acute, chronic or intermittent.<sup>2</sup> Moreover the symptoms are often subtle and non-specific. Thus the preoperative diagnosis is challenging. Upto 50% of the patients are discovered only intraoperatively for the first time.<sup>3</sup>

Intussusceptions can be classified based on intussusceptum and intussusciens into 4 categories: entero-enteric, ileo-colic, ileo-caecal, and colo-colonic. The most common causes of entero-enteric intussusception are postoperative adhesions, lipoma, Meckel's diverticulum, lipoma and malignant neoplasms like melanoma, lymphoma and adenocarcinoma. Leiomyomas are rare mesenchymal neoplasms which constitute <1% of all GI neoplasms. Leiomyoma with jejuno-jejunal intussusception is a very unusual combination and to the best of our knowledge only three cases are reported in literature.<sup>4</sup> This is probably the fourth such reported case in literature.

A number of radiologic imaging techniques with respective characteristic signs have been described for diagnosis of intussusception in adults: plain X-ray abdomen, barium studies, ultrasonography, Contrast enhanced CT, and even radionuclide studies.<sup>5</sup>

Ultrasonography is a useful tool for the diagnosis of intussusception, both in children and in adults. The classical imaging features include the "target" or "doughnut" signs on the transverse view and the "pseudo-kidney" sign or "hay-fork/trident" sign in the longitudinal view.<sup>6</sup> However it is operator dependent and requires an experienced radiologist. Moreover, bowel gas, obesity may make visualization difficult.

Abdominal computed tomography (CT) is currently considered as the most sensitive method to diagnose intussusception.<sup>7</sup> The characteristic CT features include



a “target” or “sausage”- shaped soft- tissue mass with a layering effect, mesenteric vessels within the bowel lumen are also typical.<sup>8</sup> In a recent study CT was able to distinguish between intussusception without a lead point (features: no signs of proximal bowel obstruction, target-like or sausage-shaped mass, layering effect) from that with a lead point (features: signs of bowel obstruction, bowel wall oedema with loss of the classic three-layer appearance due to impaired mesenteric circulation and demonstration of the lead mass). These findings, if validated by further studied may help to reduce unnecessary surgical interventions by sparing those who don’t have a pathologic lead point.

Flexible enteroscopy is another modality which can be used to visualize the lead point. A biopsy may be taken to ascertain the nature (benign vs malignant) of the mass. Various enteroscopy techniques like Double-balloon enteroscopy, Single-balloon enteroscopy can be utilized for small bowel intussusceptions. Similarly for lead points in large bowel, a colonoscopy may be utilized.

Despite all these, upto 50% of the patients are discovered only intraoperatively for the first time.<sup>3</sup> Surgery is necessary in adults as a pathological lead points exists in upto 90% of the cases. Moreover in 20-50% cases the lead point is malignant.<sup>9</sup> However controversy exists regarding the need for reduction and extent of resection.<sup>10</sup> It is usually agreed that reduction should not be attempted when the bowel shows signs of inflammation, ischemia or when a malignancy is suspected.<sup>3</sup>

A thorough search of English literature showed that only a few cases of intussusception due to leiomyoma of jejunum have been managed successfully. However believe, that laparoscopy is a viable and good option for treatment of such patients.

## CONCLUSION

Jejuno jejunal Intussusception due to a leiomyoma is a rare entity and preoperative diagnosis can be challenging. Despite advanced diagnostic techniques like CT and push enteroscopy the diagnosis may still be missed. In such cases surgery (laparoscopic or open) plays a diagnostic as well as definitive therapeutic role.

## REFERENCES

1. Coleman MJ, Hugh TB, May RE, Jensen MJ. Intussusception in the Adult. Australian and New Zealand Journal of Surgery. 1981;51:179–80.
2. Haas EM, Etter EL, Ellis S, Taylor TV. Adult intussusception. Am J Surg. 2003;186:75–6.
3. Azar T, Berger DL. Adult intussusception. Ann Surg. 1997;226:134–8.
4. Mansberg VJ, Mansberg G, Doust BD. Jejunojejunal intussusception secondary to leiomyoma. Australasian Radiology. 1996;40:72–4.
5. Boyle MJ, Arkell LJ, Williams JT. Ultrasonic diagnosis of adult intussusception. Am J Gastroenterol 1993;88:617-8.
6. Boyle MJ, Arkell LJ, Williams JT. Ultrasonic diagnosis of adult intussusception. Am J Gastroenterol 1993; 88:

617-618.

7. Tan KY, Tan SM, Tan AG, Chen CY, Chng HC, Hoe MN. Adult intussusception: experience in Singapore. ANZ J Surg 2003; 73: 1044-1047.
8. Begos DG, Sandor A, Modlin IM. The diagnosis and management of adult intussusception. Am J Surg 1997.
9. Harlaftis N, Skandalakis JE, Droulias C, Gray SW, Akin JT., Jr The pattern of intussusception in adults. J Med Assoc Ga. 1977;66:534–539.
10. Basu A, Dutta MK, De U, Biswas S. Jejunojejunal intussusception caused by a jejunal gastrointestinal stromal tumour (GIST). Hellenic J Surg. 2014;86:37–41.

**Source of Support:** Nil; **Conflict of Interest:** None

**Submitted:** 12-06-2018; **Accepted:** 15-07-2018; **Published:** 25-07-2018