



**ORIGINAL RESEARCH PAPER**

**Medical Science**

**ADULT JEJUNOJENUNAL INTUSSUSCEPTION CAUSED BY A SUBMUCOSAL LIPOMA IN THE JEJUNUM.**

**KEY WORDS:**

Intussusception;small Bowel;gastrointestinal Lipoma; Jejunal Tumor.

<b>Dr. T. Paulia Devi</b>	M.S.,Madras medical college postgraduate mens hostel, Opposite to tnpsc building Frazier bridge road Broadway Chennai=600003.
<b>Dr. S. Mani Selvi</b>	M.S.,D.G.O.,Madras medical college postgraduate mens hostel, Opposite to tnpsc building Frazier bridge road Broadway Chennai=600003.
<b>Dr. Bommu Gowtham Naveen*</b>	Madras medical college postgraduate mens hostel, Opposite to tnpsc building Frazier bridge road Broadway Chennai=600003. *Corresponding Author
<b>Dr. Kannan</b>	Madras medical college postgraduate mens hostel, Opposite to tnpsc building Frazier bridge road Broadway Chennai=600003.

**ABSTRACT**

Intussusception in adults is rare. The clinical picture of intussusception in adults is subtle and the diagnosis is therefore elusive. The presence of a structural abnormality in the great majority of the adult cases mandates high clinical suspicion. Gastrointestinal lipomas are rare benign tumors and intussusception due to a gastrointestinal lipoma constitutes an infrequent clinical entity. The present report describes a case of jejunojejunal intussusception in an adult with a history of severe episodes of hematochezia and colicky upper abdominal pain. The diagnosis was suspected preoperatively but computed tomography could not rule out malignancy. Exploratory laparotomy revealed jejunojejunal intussusception secondary to a lipoma which was successfully treated with segmental resection.

**INTRODUCTION:**

Since it's first description in 1674<sup>[1]</sup>, intussusception is considered a disease of infancy and early childhood and is the leading cause of acute abdomen in this age group, second only to appendicitis<sup>[2]</sup>. However, in approximately 5% cases, it's may also be encountered in adulthood accounting for 1% of adult intestinal obstructions<sup>[3,4]</sup>.

Structurally lesions are responsible for the majority of the cases in the adults with only a minority being idiopathic in contrast to childhood intussusception<sup>[5]</sup>. In addition, the possibility of malignancy as the causative lesion should be considered in adult intussusception mandating surgical exploration in the majority of cases<sup>[6]</sup>.

Adult patients with intussusception may present with acute abdominal pain necessitating surgical consultation (acute abdomen) but intermittent bowel obstruction with negative clinical and radiological findings is the usual case scenario<sup>[7]</sup>. The diagnosis can be elusive for a long period and is frequently established during laparotomy for the obstructive symptoms.

Neoplasia, both benign and malignant, is the leading cause of intestinal intussusception in adults<sup>[8]</sup>. Lipoma of the small intestine are the rare benign tumors with no malignant potential, most commonly encountered incidentally, since they are usually asymptomatic. Symptomatic lipoma manifestations are haemorrhage or intestinal obstruction<sup>[9]</sup>. Due to their intramural location, lipoma can also serve as the leading point for intussusception.

We report on a case of an adult patient that presented to our department for investigation of recent episodes of lower gastrointestinal bleeding and colicky abdominal pain. The causative lesion proved to be a jejunojejunal intussusception due to a lipoma. A review of the literature is also performed regarding this rare association revealing the diagnostic and therapeutic debated that exist.

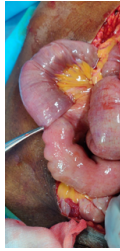
**Case Report:**

A 57 years old male patient presented with clinical features of severe colicky abdominal pain in the right side of the abdomen accompanied with vomiting for two days. The patient gave a history of intermittent colicky pain in the right

lower abdomen for three months. The pain aggravate after food intake and remains for about any hour and later reduces gradually. All the vital parameters were within normal limit. Physical examination revealed a tender lump in the right lower quadrant of abdomen. The lump disappeared after sometime and then again reappeared with the onset of symptoms. per rectal examination revealed blood stained mucus and normal tone. After admission primary resuscitation. Was done to correct the fluid and electrolyte imbalance. The patient passed red current jelly-like stools few hours after admission. X-ray of the abdomen was unremarkable at presentation. However ultrasonography revealed pseudo kidney sign. Contrast enhanced CT of the abdomen revealed the typical target sign in the right lower abdomen due to telescoping of jejunal loop for about a distance of 7 cm suggestive of intussusception With an intraluminal homogenous hypo dense lesion at the apex of intussusception most likely suggestive of lipoma. The patient underwent exploratory laparotomy. Laparotomy revealed an jejunojejunal intussusception with the apex point towards the umbilicus. With utmost gentleness intussusception was reduced by the traditional method of milking from distal to proximal direction after having released the adhesions at the neck of the lesion. After reduction an intraluminal mobile lump was palpable which is of about 4cm and about 150 cm from the ileocecal junction which acts as a lead point for intussusception. Resection anastomosis of the involved segment of the bowel with a 5 cm margin on either side was done. Cut section of resected specimen showed a pedunculated polyp with intact overlying mucosa, typical of a submucosal lesion. Histopathological examination of the specimen confirmed the diagnosis of a benign submucosal lipoma. Postoperative course was uneventful. The patient has followed up for three months and is completely symptom free.



**Fig-1 :shows ultrasound target sign**



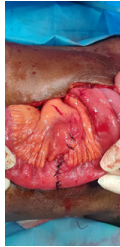
**Fig-2: shows telescoping of jejunal loop into one another.**



**Fig-3: shows resection with adequate margins.**



**Fig-4: mobile Intra luminal lesion**



**FIG-5: Shows end to end anastomosis of**



**Fig-6: shows Ct coronal section shows jejunal Jejunal loops. Intussusception.**

**DISCUSSION:**

Intussusception is leading cause of intestinal obstruction in the Pediatric population whereas in adults it a rare entity which accounts for only 1-5% of all cases presenting as bowel obstruction. Unlike children, in majority of adults patients presenting with intussusception, the underlying pathological condition can be found<sup>[10]</sup>. Pathological conditions like carcinoma, lipoma, lymphoma, diverticulum, and adenomatous polyp act as a lead point and produce invagination within lumen, thus predisposing to intussusception. A high index of suspicion is justified while dealing with intussusception in adults. The indecency of malignancy in small bowel lesions presenting as intussusception is approximately 30 percent<sup>[8]</sup>. Based on the part of the bowel involved, intussusception has been traditionally classified into following types as follows:

- (1). Ileo-ileal (confined to small bowel)

- (2). jejunojunal (confined to small bowel)
- (3). Colo-colic (involving the large bowel)
- (4). Ileo-colic (terminal ileum prolapsing into ascending colon)
- (5). ileocecal (the ileocecal valve is the leading point).<sup>[11,12]</sup>

Lipoma is a ubiquitous benign Tumor which is found anywhere along the gastrointestinal tract most commonly in the ileum<sup>[13]</sup>. Smaller lesions don't cause much symptoms. However large lesions invariably leading to intussusception. The terminal part of ileum is the commonest site for lipomas in adults to occur. The submucosal type is most common followed by inter muscular and serosal types.

Preoperative diagnosis of intussusception in adults is a very challenging problem due to variability in the clinical presentation. As seen in the case presented careful repeated clinical assessment will help in establishing the intermittency of the abdominal lump which coincides with the patient's symptoms of bowel obstruction. Reijnen et al.<sup>[14]</sup> reported that preoperative diagnosis could be made only in 50% of patients with the help of imaging. Ultrasonography(US) and computed tomography(CT) of abdomen are very much helpful imaging modalities for diagnosis of intussusception and nature of intraluminal lesions. Ultrasound will reveal a rounded echogenic mass typically described as pseudo kidney sign, While on CT scan an intussusception due to intestinal lipoma is seen as a well- circumscribed rounded homogenous lesion with attenuation value between -40 and -120HU, typical of fat<sup>[15]</sup>. A diagnostic technique that may be used, depending on the nature of symptoms, is capsule endoscopy. Although obstructive symptoms are contra-indicatory to capsule endoscopy, this new modality for the evaluation of the small bowel could be very useful in cases with long standing abdominal pain and negative radiologic examination, either CT or barium studies, to exclude the possibility of malignancy. Intussusception in capsule endoscopy has been reported to appear as amass lesion of the small bowel. The evaluation of incidentally discovered intussusception in adults for the presence of a structural lead point could be another indication for capsule endoscopy. Moreover, enteroscopy with the push can examine approximately 70-150 cm of the small bowel and double balloon enteroscopy can examine the full length of the small bowel both ante grade and retrograde. Those techniques are advantageous over capsule endoscopy in that a biopsy specimen can be acquired from any lesion discovered and even endoscopic polypectomy is feasible through the working channel of these scopes.

For acute intussusception in adults, laparotomy is considered as a treatment of choice rather than making an attempt at hydrostatic reduction, as there is a considerable risk of an underlying malignancy<sup>[16]</sup>. Though the level of bowel involved in intussusception varies, controversy still prevails over issue as to whether reduction of the intussusception should be tried intraoperatively or not. In the present case a preoperative diagnosis of an intraluminal lipoma as a cause for intussusception was made. As the lesion involved a considerable length of the small bowel an attempt to reduce the intussusception was made and was successfully accomplished. This saved a significant length of the normal small bowel from a major resection and there after its consequent morbidity. The segment containing the lipoma should then be resected after. The only drawback of this method is that there may be inadvertent bowel injury and thereby a possibility of dissemination of malignant cells during manipulation while trying to reduce intussusception in cases of malignancy. Therefore one has to be gentle. If the attempt does not yield any result, it should be abandoned followed by a resection anastomosis<sup>[17]</sup>.

**CONCLUSION:**

Intussusception in adult is an uncommon condition invariably

associated with an underlying cause which needs surgical intervention to arrive at a definitive diagnosis. Small bowel lipoma can cause intussusception presenting as obstruction. Ultrasound and CECT are very important adjuncts in preoperative diagnosis of intussusception. Early surgical intervention is the main stay of definitive diagnosis and treatment.

## REFERENCES

- 1 de Moulin D, Paul Barbette, M.D.: a seventeenth-century Amsterdam author of best-selling textbooks. *Bull Hist Med* 1985; 59:506-514
- 2 Akçay MN, Polat M, Cadirci M, Gencer B. Tumor-induced ileo-ileal invagination in adults. *Am Surg* 1994; 60:980-981
- 3 Eisen LK, Cunningham JD, Aufses AH. Intussusception in adults: institutional review. *J Am Coll Surg* 1999; 188:390-395
- 4 Azar T, Berger DL. Adult intussusception. *Ann Surg* 1997; 226:134-138
- 5 Begos DG, Sandor A, Modlin IM. The diagnosis and management of adult intussusception. *Am J Surg* 1997; 173:88-94
- 6 Felix EL, Cohen MH, Bernstein AD, Schwartz JH. Adult intussusception; case report of recurrent intussusception and review of the literature. *Am J Surg* 1976; 131:768-761
- 7 Weillbaecher D, Bolin JA, Hearn D, Ogden W. Intussusception in adults. Review of 160 cases. *Am J Surg* 1971; 121:531-535
- 8 Zografos G, Tsekouras DK, Lagoudianakis EE, Karantzikos G. Small intestinal lipoma as a cause of massive gastrointestinal bleeding identified by intraoperative enteroscopy. A case report and review of the literature. *Dig Dis Sci* 2005; 50:2251-2254.
9. G.Lianos, N. Xeropotamos, C. Bali, G. Baltogiannis, and E. Ignatiadou, "Adult bowel intussusception: presentation, location, etiology, diagnosis and treatment," *Giornale di Chirurgia*, vol. 34, no. 9-10, pp. 280-283, 2013
10. N. Wang, X.-Y. Cui, Y. Liu et al., "Adult intussusception: a retrospective review of 41 cases," *World Journal of Gastroenterology*, vol. 15, no. 26, pp. 3303-3308, 2009.
11. W.T. Stubenbord and B. Thorbjarnarson, "Intussusception in adults," *Annals of Surgery*, vol. 172, no. 2, pp. 306-310, 1970.
12. D. M. Nagorney, M. G. Sarr, and D. C. McIlrath, "Surgical management of intussusception in the adult," *Annals of Surgery*, vol. 193, no. 2, pp. 230-236, 1981.
13. M. N. Akcay, M. Polat, M. Cadirci, and B. Gencer, "Tumor-induced ileo-ileal invagination in adults," *American Surgeon*, vol. 60, no. 12, pp. 980-981, 1994.
14. H. A. M. Reijnen, H. J. M. Joosten, and H. H. M. de Boer, "Diagnosis and treatment of adult intussusception," *The American Journal of Surgery*, vol. 158, no. 1, pp. 25-28, 1989.
15. H. Akyildiz, I. Biri, A. Akcan, C. Küçük, and E. Sözüer, "Jejunal lipoma: case report," *Erciyes Tıp Dergisi*, vol. 33, no. 1, pp. 083-086, 2011.
16. F. Barbiera, S. Cusmà, D. Di Giacomo, M. Finazzo, A. Lo Casto, and S. Pardo, "Adult intestinal intussusception: surgery-CT correlations," *Radiologia Medica*, vol. 102, no. 1-2, pp. 37-42, 2001.
17. A.-W.N. Meshikhes, S. A. M. Al-Momen, F.T. Al Talaq, and A. H. Al-Jarof, "Adult intussusception caused by a lipoma in the small bowel: report of a case," *Surgery Today*, vol. 35, no. 2, pp. 161-163, 2005.