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CASE REPORT

A Rare Cause of Jejunojejunal Intussusception in an Adult

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Abstract Jejunojejunal intussusceptions are not common in adults and unlike in children, a lead point is usually found. The clinical presentation in adults tends to be more chronic or intermittent and include abdominal pain, obstructive symptoms, gastrointestinal bleeding or palpable mass. These unspecific symptoms often lead to a late diagnosis. The clinical picture is subtle and diagnosis is therefore elusive. We report a case of jejunojejunal intussusception secondary to gastrointestinal stromal tumor (GIST) in a 50 year old female.

Keywords Adult intussusception · Jejunal GIST

Introduction

Intussusception is defined as the telescoping of a segment of the gastrointestinal tract into an adjacent one. Intussusception is uncommon in adults compared with the paediatric population. It is estimated that only 5% of all intussusceptions occur in adults and approximately 5% of all bowel obstruction in adults are s a result of intussusception [1]. The underlying causes in adults vary greatly, a mechanical cause is seen in 90% of all adult intussusceptions. The lead points of adult intussusceptions that involve colon are usually malignant; whereas those that involve the small bowel tend to be benign [2]. Preoperative diagnosis is often difficult because the symptoms are non specific. Images generated by ultrasonography and computerized tomography (C.T.) are of pathognomonic quality and enable preoperative diagnosis [3]. We report an unusual case of jejunojejunal intussusception induced by jejunal gastrointestinal stromal tumor (GIST) acting as the apex of intussusception in a 50 year old female.

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Case Report

A 50 year old female was admitted with periumbilical pain of 6 h duration associated with nausea and vomiting. She had no relevant past history other than several similar episodes over the past 6 months which had remitted spontaneously.

General physical examination was within normal limits. Abdominal examination revealed no abnormality. Ultrasonography of abdomen showed a supraumbilical complex multilayered oval mass, with alternating hyperechoic and hypoechoic concentric rings suggestive of intussusception. After relevant investigations patient was taken up for emergency surgery. Laparotomy showed that the patient had jejunojejunal intussusception and the apex of intussusception (Fig. 1) was jejunal tumor measuring about 3×2 cm (Fig. 2). There was no serosal involvement, infiltration to surrounding viscera and mesenteric lymphadenopathy. Jejunojejunal anastomosis was performed after resection of the tumoral segment with 10 cm clearance margin on either side of the tumor. Post-operative period was uneventful. Sutures were removed on 10th post-operative day. After 3 months of follow-up patient is asymptomatic.

Histopathological examination of excised specimen with hematoxylin–eosin stain showed spindle shaped tumor cells with bland nucleus and indistinct cytoplasm arranged in interlacing bundles in the submucosa without mitosis. There was no tumor necrosis, mucosal and muscular

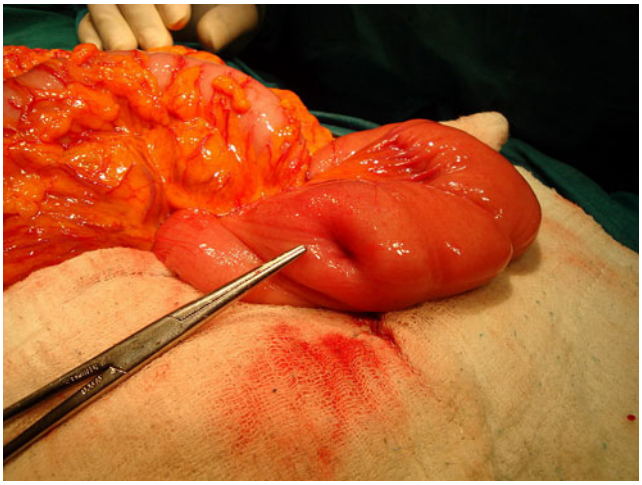

Fig. 1 Intraoperative photograph showing apex of jejunojejunal intussusception

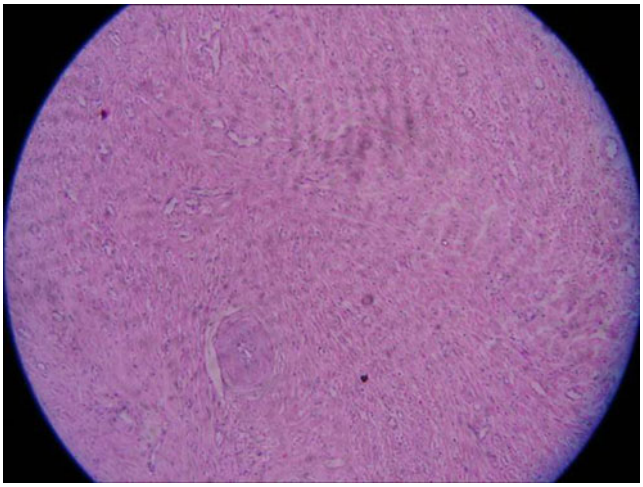

Fig. 3 Microphotograph of excised speciment. (hematoxylin–eosin stain, magnification × 100)

invasion, thus suggestive of benign gastrointestinal stromal tumor (Fig. 3). Resected margins of the excised specimen were free of tumor.

Discussion

Tumors of the small intestine comprise of 1.7–6.5% of all gastrointestinal neoplasms. They are mostly benign and are uncommonly seen in clinical practice [4]. GISTs are rare non-epithelial digestive tract tumors first identified by Mazur and Clark in 1983, arising from the connective tissue of the digestive tract with an incidence of 0.1–1% of gastrointestinal malignancies [5]. The clinical manifestation depends upon the site, size and behaviour of the GIST. Tumor of more than 5 cm in size, tumor with high mitotic count (10 per 50 high power fields), presence of tumor necrosis, mucosal invasion, epithelioid histology, high Ki-67 proliferation index and high E2F1 expression are features of malignant GIST. Most GISTs are clinically silent till they grow large, bleed, rupture and cause mechanical obstruction or act as a lead point for intussusception. They may be detected incidentally on imaging, endoscopy or at surgery. Intussusception and obstruction are uncommon presentation of these lesions because of their tendency to grow in an extra luminal fashion [6].

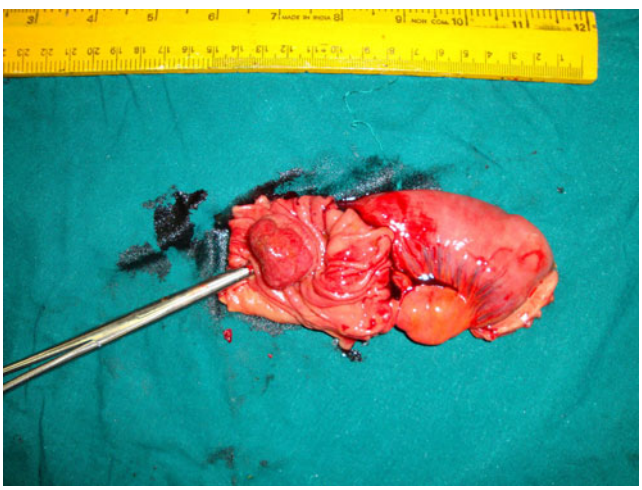

Fig. 2 Photograph of the excised specimen showing jejunal gastrointestinal stromal tumor

Adult intussusception is a rare disease and symptoms tend to be more chronic or intermittent with vague abdominal pain (71%), nausea and vomiting (68%), abdominal distension with partial obstruction (45%) or palpable mass at physical examination; therefore it is difficult to diagnose intussusception [2]. Ultrasonography is very appropriate and useful in the diagnosis of intussusception as it is more readily available and generalized technique than C.T, enabled to be used more often at the time of abdominal crisis. C.T. scan with oral and intravenous contrast has been shown to be the most accurate diagnostic tool for the evaluation of intussusceptions [2].

Conclusion

Adult intussusception due to gastrointestinal stromal tumor is rare and is difficult to diagnosis clinically. Their unusual presentation must be borne in mind. Ultrasonography and computerized tomography are useful diagnostic tools for the evaluation of this condition. Surgery offers definitive treatment and is recommended in all cases of adult intussusception.

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