

An Intestinal Lipoma Presenting as a Case of Intussusception

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ABSTRACT

Intussusception is a process of invagination of proximal bowel into distal part. Although, most of the cases in children are idiopathic. Neoplasms (benign or malignant) are the most common causes reported in the adults. Small bowel intussusceptions are most commonly associated with benign neoplasms (like lipoma, leiomyoma, hemangioma or neurofibroma) and other causes like

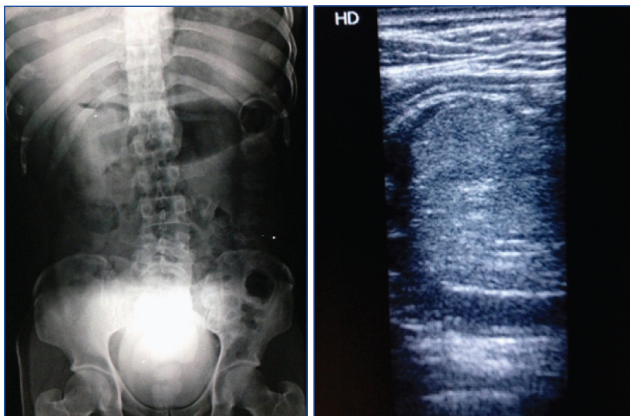
adhesions and lymphoid hyperplasia. On contrary, large bowel intussusceptions are mostly associated with malignant neoplasms. We present a case of colo-colonic intussusception in a 58-year-old male patient of Indian origin with features of vague abdominal pain for two months, occasional vomiting and mucoid stool for same period of time with an intestinal lipoma being the lead point.

Keywords: Benign colonic tumour, Bowel within bowel, Neoplasms

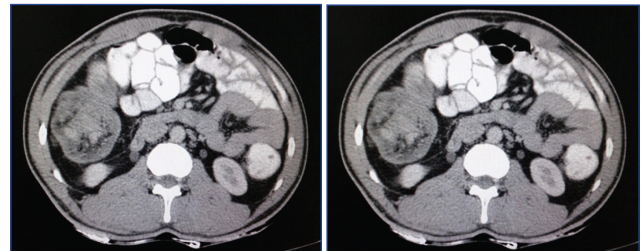
CASE REPORT

A 58-year-old male patient presented to Department of Surgery with vague abdominal pain, occasional vomiting and mucoid stool for two months. There was no history of blood in stool. On physical examination, mild tenderness in epigastric region was noted. There was no symptom of intestinal obstruction. He admitted taking some PPIs and antacids. On X-ray, meniscus sign (crescent of air outlining the intussusceptum) was noted in the transverse colon region suggesting a possible diagnosis of colo-colic intussusceptions [Table/Fig-1]. On USG bowel within bowel appearance was visualized suggesting intussusceptions [Table/Fig-2]. On

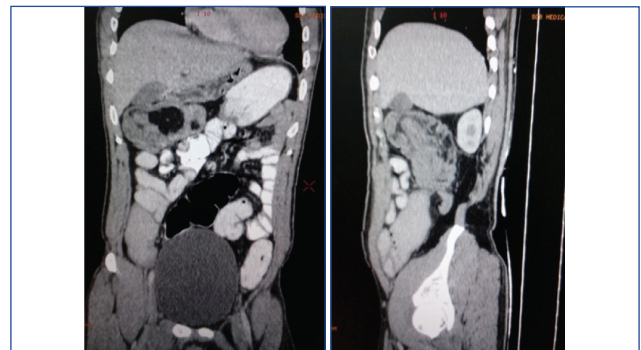
careful imaging a rounded echogenic lesion was noted at the distal end of the intussusception. A contrast enhanced CT-scan was advised which revealed a lobulated lesion of fatty attenuation suggesting a lipoma which triggered the



[Table/Fig-1]: AP abdominal radiograph showing claw-sign of intussusception. **[Table/Fig-2]:** USG image showing echogenic rounded structure corresponding to lipoma.



[Table/Fig-3]: Axial CT image showing bowel within bowel appearance. **[Table/Fig-4]:** Axial CT image showing negative HU lipoma.



[Table/Fig-5]: Coronal CT image showing intestinal lipoma. **[Table/Fig-6]:** Sagittal CT image showing bowel within bowel appearance.

intussusceptions [Table/Fig-3-6]. The patient underwent limited resection of the bowel with end to end anastomosis .

DISCUSSION

Intussusception is the invagination of a segment of proximal bowel into the adjacent distal bowel. It is more common in children, being the most common cause of intestinal obstruction in children aged between three months to six years [1]. It is rare in adults accounting for only 1% cases of intestinal obstruction [1-3]. Intussusceptions are classified on the basis of their location into four groups: enteroenteric, ileocolic, ileocaecal and colocolic [2,4].

About 90% of cases of adult intussusception are caused by an underlying organic pathology and only 10% cases are deemed to be idiopathic [1,4,5].

Common causes of intussusception in adults are neoplasms, adhesions, chronic diarrhoea and motility disorders like Hirschsprung's disease, irritable bowel syndrome etc., [1,6]. Neoplasms whether benign or malignant account for 65% of adult intussusceptions [3].

Intussusceptions are more common in small bowel accounting for 66% of cases while large gut constitutes the rest. Small bowel intussusceptions are most commonly associated with benign neoplasms like lipoma, leiomyoma, hemangioma or neurofibroma and other causes like adhesions and lymphoid hyperplasia. On contrary, large bowel intussusceptions are mostly associated with malignant neoplasms (65%) with the rest being constituted by benign lesions like lipoma and adenoma [1,3].

Lipomas are the second most common benign lesions of colon after adenoma though it represents the most common benign cause of large bowel intussusceptions [4,5].

Most patients follows, a subacute or chronic course with nonspecific symptoms like abdominal pain, nausea, bilious vomiting and rarely bloody stool mixed with mucus (also known as currant jelly stool) [1,4,5].

Diagnosis

Plain radiograph: Usually there is normal bowel appearance. Sometimes however, there can be a crescent of air outlining the intussusceptum called "meniscus sign".

Barium study: On barium studies, accumulation of contrast between the intussusceptum and intussusciens produces ring shadows which represent "the coiled spring sign". Another sign seen is the "claw sign" in which the barium in the intussusciens is seen as a claw around the negative shadow of the intussusceptum [7].

USG: On longitudinal imaging, telescoping of bowel loops can easily be visualized mimicking the appearance of a kidney (pseudo-kidney or sandwich sign). On axial view, bowel within

bowel appearance is noted (Target-sign/Doughnut-sign) [8]. USG should be directed at finding any lead point triggering the intussusceptions. Mesenteric fat may sometimes be confused with a lipoma which can be differentiated by the traversing mesenteric vessels.

CT-scan: CT-scan appears to be the modality of choice with sensitivity of approximately 80% and specificity close to 100% [5,7]. In longitudinal scans, the sausage shaped mass appearance is characteristic while in axial scan, target mass is noted. Often there is mesenteric fat surrounding the intussusceptum containing blood vessels. CT is useful to find out the lead point; however it's not always detected. Lipoma on CT images appears as a well marginated spherical or oval mass of fat attenuation with no blood vessels within unlike mesenteric fat [4,7,8].

CT is also valuable prior to surgery to detect any vascular compromise or for the detection of gas in the intussusceptum which might indicate perforation or gangrene [8].

Transient intussusceptions without any leading cause can also occur where mesenteric fat may sometimes be confused with a lipoma. Limited resection of the intussusceptions is the treatment of choice. Colonoscopic reduction can sometimes be used [1].

CONCLUSION

Malignant neoplasms being the most common cause of intussusception in adults, CECT should always be advised prior to surgery. Benign lesions like colonic adenoma and lipoma should also be kept in mind while evaluating an adult patient with intussusceptions to prevent unnecessary extensive resection. CECT can readily diagnose a case of intestinal lipoma and considered the imaging modality of choice. Limited resection is considered as ideal treatment for lipoma.

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