



Appendicular Intussusception

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Abstract:

Intussusception of the appendix is an uncommon condition and may present as an acute abdomen. We present a case of 6 year old male child who presented with pain abdomen for 10 days duration. Radiological diagnosis was made of an ileocolic intussusception, which per-operatively turned out to be an appendicular intussusception. Patient was managed with right hemicolectomy and ileotransverse anastomosis.

Key words: Appendix, Abdominal Pain, Intussusception, Laparotomy, Intestine.

Introduction

Intussusception is a common pediatric problem with ileocolic intussusception being the commonest type. Intussusception of appendix is an uncommon condition and may present as an acute abdomen. It is an infrequent appendiceal lesion with an incidence of 0.01% among patients undergoing appendectomy. We present a case of 6 year old male child who presented with pain abdomen for 10 days. He was investigated and radiological diagnosis of ileocolic intussusception was made. On explorative laparotomy he was found to have appendicular intussusception.

Case Report

A 6 year old boy presented with pain in the right lower abdomen for last ten days. Pain was associated with off and on vomiting. The pain was a generalized, dull aching with intermittent colic in

the umbilical region and right iliac fossa. There was no history suggestive of fever, vomiting, weight loss, and altered bowel habits.

On general examination, his vital parameters were stable. Abdominal examination revealed tenderness over the right iliac fossa with maximum tenderness over Mc Burney's point. Digital rectal examination did not reveal any abnormality. His routine investigations including haemogram, liver functions, renal profile, blood sugars, abdominal and chest radiograph were normal. An abdominal ultrasound revealed a mass in the right iliac fossa measuring 3x3 cm. CECT whole abdomen was done which showed ileocolic intussusception.

An elective laparotomy revealed intussusception of the appendix into the caecum just below the ileocaecal junction. An attempt to reduce the

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appendix was made, which was not possible due to fibrosis. The appendiculo-caecal intussusception was very near the ileocaecal junction, and considering suspicion of appendicular malignancy right hemicolectomy with ileotransverse anastomosis was done. Biopsy report was consistent with findings of appendicular intussusception, mesenteric lymph nodes showed reactive hyperplasia. There was no evidence of malignancy.

Post-operative period was uneventful and patient was discharged on 7th post-operative day. During follow up patient was asymptomatic for 1 year and subsequently lost to follow up.

Discussion

The intussusception of the appendix is a rare phenomenon, its incidence being 0.1% [1]. Intussusception of the appendix was first described in 1858 [2]. It affects all ages but is usually associated with males in the first decade [3]. Several factors and conditions can contribute to the pathogenesis of appendicular intussusception. These can be broadly divided into anatomic and pathologic factors. The anatomical variations it can result from are a fully mobile appendix, a narrow thin mesoappendix, a poorly fixed high caecum, due to hyperperistalsis etc. Several pathological conditions of the appendix can lead to its intussusception viz. foreign bodies in the appendix, inflammation of the appendix (including endometriosis), neoplasms, etc. [4].

Our case was a 6 year old male child who presented as a case of recurrent pain abdomen in surgery department. He was investigated and on ultrasound abdomen 3×3 cm mass in right iliac fossa was suggestive of intussusception.

In recent years, ultrasound diagnosis has been more common in the pediatric population but remains hazardous and diagnosis by CT, endoscopy or barium enema is still described

[5]. CECT whole abdomen of patient was done which revealed target sign of intussusception [Fig.1]. An appendiceal intussusception may be mistaken for a polyp or carcinoma, and failure to accurately diagnose this condition has resulted in patients undergoing colonoscopic polypectomy with resultant perforation and peritonitis [6]. Pathologically intussusception of the appendix has the following characteristics: (i) Lesions inside the lumen like faecoliths, foreign bodies. (ii) Lesions of the wall like hypertrophic lymphoid follicles, adenovirus infections, mucosal polyps, mucocoeles, adenocarcinoma, carcinoid, endometriosis, tuberculosis, and mucinous cystadenoma [7].

Disvagination of the appendix has been reported using a barium enema in cases of simple inversion [8]. Present case was unlikely to be relieved conservatively so taken up for explorative laparotomy which revealed invaginated appendix very near to ileocaecal junction as shown in [Fig.2]. Figure 3 and 4 shows right hemicolectomy specimen with intussuscepted appendix and patent ileocaecal junction.

Conclusion

An appendiceal intussusception though a rare condition, should be kept in mind while evaluating

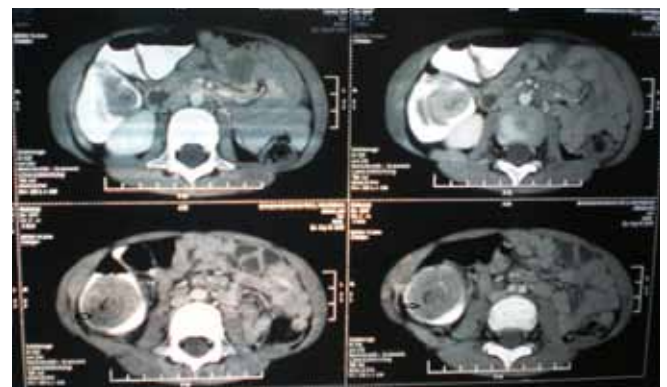


Fig.1: CECT abdomen showing target sign of intussusception.

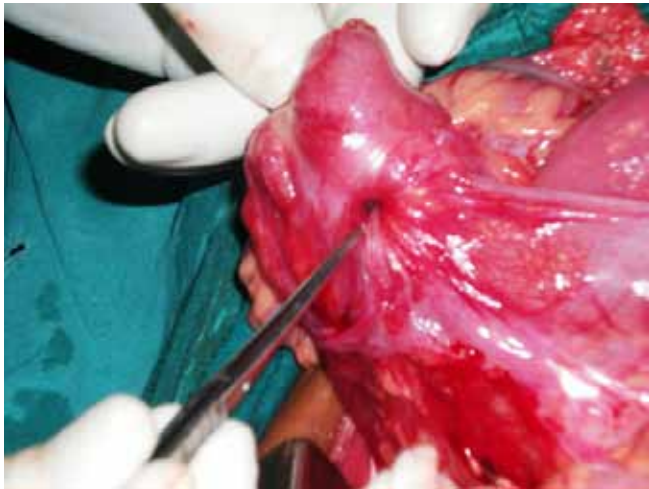


Fig.2: Peroperative photograph showing invaginated appendix very near to ileocaecal junction.

right iliac fossa pain/ mass. The mass (polyp) visualized in caecum during colonoscopy should be excised colonoscopically with great caution.

References

1. McKidd J. Case of invagination of the cecum and appendix. *Edinb Med J* 1858;4:793-796.
2. Collins DC. 71,000 human appendix specimens: a final report, summarizing 40 years study. *Am J Proctol* 1963;14:365-381.
3. Ram D, Peckham C, Akobeng AK, Thomas AG, David TJ, L. Patel L. Inverted appendix mistaken for a polyp during colonoscopy and leading to intussusception. *Journal of Cystic Fibrosis* 2005;4:203-204.
4. Kataria AN, Rathod MG, Bhandarwar AH, *et al*. Inversion of appendix with appendico-caeco-colic intussusception. *Bombay Hospital J*. 2002;44:282-284.
5. Schmidt FR, McCarthy JD. Intussusception of the appendix with endometriosis presenting as a caecal tumor. *Arch Surg* 1971;103:515-517.
6. Lahoti HN, Singh RV. Ileo-cecal Duplication Cyst Masquarading as Intussusception. *Journal of Case Reports* 2013;3(2):410-412.
7. Sreepuram, Narketpally, G Sarath Babu. Appendiculo-caecal intussusceptions. *MJAFI* 2011;67:265-266.
8. Everarts P, Vanderveken E, Peny MO, DeBont B. Appendicular intussusception with lymphoid hyperplasia. *JBR-BTR* 2013;96(2):93.



Fig.3: Specimen showing intussuscepted appendix.



Fig.4: Specimen showing patent ileocaecal junction.