



A RARE CASE OF APPENDICEAL INTUSSUSCEPTION: – CASE REPORT

Clinical Research

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ABSTRACT

Appendiceal intussusception is a very rare cause of childhood abdominal pain. Appendix as a content of the intussusceptum is a very unusual cause of ileocolic intussusception. The most commonly affected age group is paediatric age group. It may present as primary appendiceal invagination or may be the cause of secondary intussusception.

KEYWORDS

Appendix, Appendiceal Intussusception, Intussusception

INTRODUCTION

Intussusception is a serious condition in which telescoping or invagination of one portion (segment) of bowel occurs into the adjacent segment. Appendiceal intussusception presents as a rare condition with an incidence of approximately 0.01%.^{1,2} Its incidence rate is 0.01% in 11000 human appendix specimens.^{3,4} This condition primarily occurs in paediatric age group.⁵ A variety of underlying anatomical and physiopathological causes as lead point are described.⁶ Diagnosis is made by ultrasound, barium enema, CT scan and colonoscopy.^{4,12-15} It's an important entity to recognize as it can mimic caecal mass or a gastrointestinal neoplasm. This case report summarizes a case of appendiceal intussusception and a brief review of literature. It is classified in four types and is based on the level of appendiceal invagination (Mcswain classification). In type 1, appendiceal tip is the intussusceptum, and the more proximal portion is the intussusciens. In type 2, the base of appendix is the intussusceptum, and the cecum is the intussusciens. In type 3, the proximal part of the appendix forms the intussusceptum and the distal portion is the intussusciens and in type 4, there is a complete inversion of the appendix into the cecum.^{13,14,18} Clinical presentation of appendiceal intussusception include four types asymptomatic, intussusception, recurrent intermittent right lower quadrant pain with vomiting and melaena, and acute appendicitis.³⁻⁶

Case History

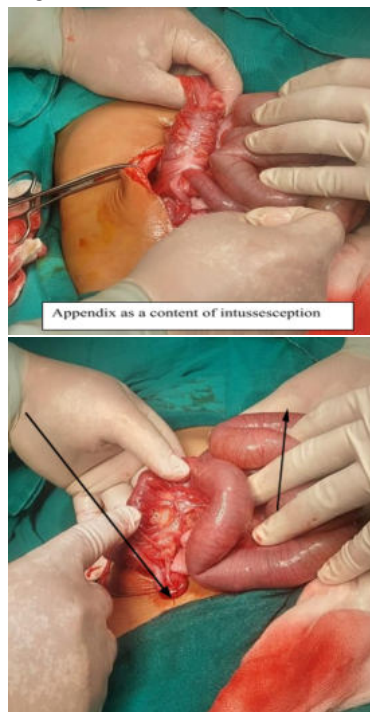
A 7 month male child presented in surgery casualty department with complaints of vomiting since 2 days non bilious, blood in stools since 2 days 2-3 episodes and fever on and off for last 2 days. Patient had no significant past history. On clinical examination: patient was vitally normal with abdominal distention. Investigations were done in which TLC was 9000/mm and other biochemical parameters were within normal limit. Patient was clinically diagnosed as a case of obstruction and was advised an ultrasound abdomen.



Target sign on USG

Ultrasound abdomen findings showed –thickened and edematous bowel loops with surrounding moderate free fluid and mesenteric lymphadenopathy. Evidence of mass like lesion showing swirled pattern of hyperechogenicity and hypoechogenicity suggestive of target sign likely intussusception. Distal bowel loops showed to and fro peristalsis suggestive of obstruction.

Patient was taken for laparotomy and manual reduction was done. On exploration, there was invagination of appendix and ileum into the caecum. This correlates type 1 appendiceal intussusception in our patient according to Mcswain classification.



Manual Reduction Done

DISCUSSION

Appendiceal intussusception is very uncommon which presents more in first two decades of life.¹⁶ The first case of appendiceal intussusception was reported in 1858. Half of pediatric cases occur in children less than 10 years of age and the boy/ girl ratio occurrence is 4-

5/1. The major cause of appendiceal intussusception is abnormal peristalsis of appendix secondary to local irritation. Local irritants such as fecoliths, worms, foreign bodies, polyps, hypertrophied lymphoid follicles, mucocoeles, endometrial implants have been implicated.¹⁻⁸⁷ The simple (primary) form intussusception of appendicular mucosa (i.e., only spontaneously invagination of appendix into cecum) in some instances might be associated secondary to cecocolic or ileo-colic intussusception^{3,16,17}. In 1963, Collins concluded in a 40-year prospective study involving 71,000 cases of appendectomy, that the incidence of appendiceal intussusception was 0.01%.¹⁹ Diagnosis of appendiceal intussusception is difficult. Radiologic evidence helps in narrowing down and focusing attention to a subset of possible etiologies. Ultrasound is the method of choice for children with suggestive signs and symptoms, the classic imaging of intussusception being of “onion skin-like lesion”. CT is the most commonly used diagnostic modality. It shows a subhepatic cecum and an appendix surrounded by a rim of digestive structures displaying a “target-like” sign, typical of appendiceal intussusception. Colonoscopy is another method that can show signs suggestive of this condition, since it allows the direct view of a vegetating image inside the cecum, which must be differentiated from a neoplastic process.²⁰ In our patient the USG scan has clearly shown the picture of classical target sign.

CONCLUSION

Appendiceal intussusception is very rare condition with the appendix invaginated in the caecum and very few cases have been reported in literature. However, the specific type of intussusception is diagnosed on ultrasound or CECT. It requires aggressive approach for treatment as it is one of the obstructive pathology in children. The mainstay of clinical presentation is intermittent abdominal pain while patients may be completely asymptomatic between attacks. Appendiceal intussusception may act as a leading point to ileocolic intussusception and is frequently concealed by it. The treatment is appendectomy. Both pediatric surgeons and radiologists should be aware of this occurrence to provide adequate management and avoid complications.

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