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WHY ADULT INTESTINAL INTUSSUSCEPTION SHOULD ALWAYS BE TREATED SURGICALLY RATHER THAN CONSERVATIVELY: A CASE SERIES STUDY AND REVIEW OF LITERATURE.

Gastroenterology

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ABSTRACT

Intussusception is commonly seen in children. Adult intussusception is very uncommon. The classical sign and symptoms of pediatric intussusception such as colicky pain, currant jelly like stool with palpable doughy mass in abdomen are not seen in adults. Vague symptom makes the diagnosis more difficult. Unlike pediatrics intussusception which can be managed successfully with enema, colonoscopy or conservatively, adult one is difficult to manage and are notorious for recurrence. Idiopathic intussusception without lead point is less common than one having lead point. This lead point sometimes turnout to be a malignant, which have to be removed surgically. Conservative approach may give transient relief but it unnecessarily increases the morbidity and stage of malignancy. Adult intussusception should be managed surgically rather than conservatively.

KEYWORDS

Adult. Intussusception. Malignant. Currant jelly. Recurrence. surgically

INTRODUCTION:

Intussusception is defined as telescoping of segment of bowel with its mesentry into immediately distal bowel. Barbette first reported it in 1674, [1] and further John Hunter presented a detailed report on intussusception in 1789. [2] An intussusceptent is the proximal segment of bowel which gets telescoped into the distal bowel called intussuscepiens. There are different types of intussusception. On the basis of anatomical location it can be classified as enteroenteric, enterocolic, ileo-caecal, colocolic or enterogastric. The exact etiopathogenesis of intussusception is no very well understood but it may be attributed to idiopathic, adenomas, sub mucous lipoma, adenocarcinoma diverticulosis and bowel adhesion. Intussusception usually seen at the junction of freely mobile bowel to retroperitoneally fixed bowel or fixed bowel secondary to adhesion or surgery. There are several literatures available which advocates conservative management of adult intussusception and some supports surgical management. Recent advances in diagnostic imaging especially contrast enhanced computer tomography and endoscopy helps in deciding the best line of management. Earlier studies show that definitive surgical intervention should be done to treat adult intussusception. Meanwhile some studies advocated conservative approach for managing adult intussusception. The logic behind this conservative approach was that newer diagnostic modalities such as double contrast computerized tomography diagnose the cases of intussusception correctly. Adult intussusception should be treated as a malignancy, especially those cases which have a lead point. Wider excision with clearing all the nearby tissue, mesentry and lymphnodes is advocated. Here we are sharing case series of adult intussusception, its presentation and management. We are sharing our experiences in management of these cases. We also reviewed the literatures.

Case 1:

A fifty two years old female patient presented in the emergency with chief complain of pain abdomen for 2 months aggravated since four days with distension of abdomen and nausea. Patient had similar type of attack seven months ago. She had no history of abdominal surgery. Her abdomen was distended, all quadrants were resonant on percussion and bowel sound was exaggerated. Her x-ray abdomen showed multiple air fluid level. Her ultrasound of whole abdomen showed classical target sign suggestive of small bowel intussusception. CECT abdomen could not be done because her renal function test was deranged. Patient was put on parenteral antibiotics and Ryles tube aspiration. Patient gets improved in next four days and repeat ultrasound was almost normal. Patient discharged on the fifth day. After three and half months she again presented with features of acute intestinal obstruction. She was worked up for emergency laparotomy. Abdomen opened through midline, there was ileoileal intussusception about twelve centimeters in length with a Meckel's diverticulum about twenty centimeter apart (Figure-1). The involve segment along with the mesentry was resected and ileo-ileal anastomosis done. The patient discharged on the ninth post operative day and remained asymptomatic till today. The resected specimen was grossly forty five centimeter in length. There was a polyp 8cm away from the proximal cut end of the specimen. Size of the polyp was 6.5cm×3cm x2cm, cut section showed grey white smooth surface without evidence of haemorrhage or necrosis. Microscopically it had features of premalignant hyperplastic polyp. The mesentry contained thirteen lymphnodes which were normal on microscopy.

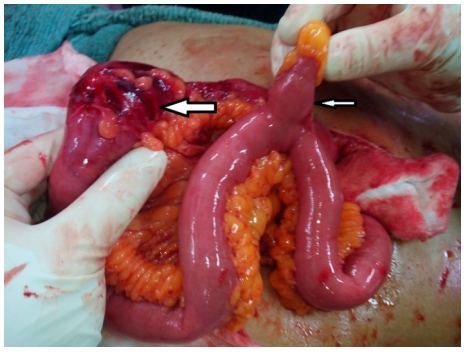

Figure-1: Showing ileo-ileal intussusception (thick white arrow) and a Meckel's diverticulum in the ileum (thin white arrow).

Case 2:

Male patients of fifty six years age presented to the emergency with chief complain of pain abdomen and vomiting for three days. He had history of similar episode of attack in the past which got subsided itself without any treatment but this time the pain was severe colicky in the central area of abdomen. The vomiting was bilious in nature. There were no other associated symptoms. This patient had no history of abdominal surgery in the past and had not suffered from tuberculosis, diabetes, inflammatory bowel diseases. CBC revealed leucocytosis with neutrophilia and Hb was 11.6 gm%. X-ray abdomen showed multiple air fluid level in central abdomen. Patient diagnosed provisionally a case of subacute intestinal obstruction. Ryle's tube applied and patient was put on parenteral fluid, analgesic and antibiotics. Patient gets improved on third day. Repeat x-ray abdomen was normal. Patient discharged on third day. Two weeks later, patient again admitted in the emergency department with features of acute intestinal obstruction. His x-ray showed multiple air fluid level suggestive of intestinal obstruction. Ultrasonography showed “target sign" suggestive of intussusception (Figure-2A). Patient was planned for emergency laparotomy. On exploration, we found ileo-ileal intussusception

of length about eight centimeters (Figure-2B). The involved segment was resected and ileo colic anastomosis done. Patient's post operative course was uneventful. He remained asymptomatic in seven months of follow up period. The histopathological report revealed a submucous lipoma as lead point.

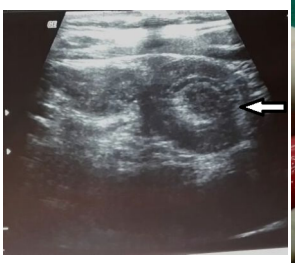

Figure-2A : Showing Classical "target Sign" Of Intussusception On Ultrasonography.

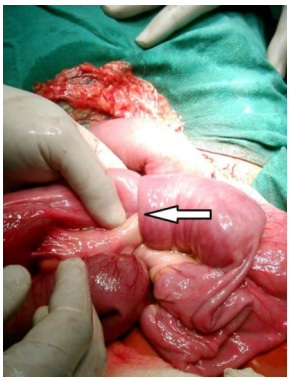

Figure-2B: showing ileo-ileal intussusception with adjoining mesentry as a part of intussusceptent. (White arrow)

Case 3: A male patient of age twenty two years presented to the emergency with chief complains of pain abdomen and multiple episodes of vomiting for three days and non passage of stool for one day. On physical examination the patient was dehydrated and his abdomen was distended. All quadrant of abdomen was resonant on percussion, bowel sound was exaggerated. On investigating we found Hb% was 14.2gm%, TLC was 12800/Cumm, rest all the parameter were within normal limit. His X-ray abdomen showed multiple air fluid level suggesting small bowel obstruction. Ultrasonography of whole abdomen showed target sign suggesting small bowel intussusception. Patient was put on intravenous fluid and antibiotics with Ryle's tube insertion. Patient did not improve on conservative treatment and hence exploratory laparotomy done. On exploration we found a small length of 3cm ileo-caecal intussusception, which was reduced on milking and that part of ileum was fixed to the parietal wall. Abdomen closed into layers. Post operative period was uneventful. Patient remained asymptomatic for a follow up period of eight months. After eight months patient again presented with similar complain for which he was admitted in the emergency and worked up for emergency laparotomy. Contrast computerized tomography showed classical target sign suggestive of ileoileal intussusception with adenomatous growth as lead point. On exploration we found ileo- ileal caecal intussusception. We resected the terminal ileum, the caecum and few centimeters of ascending colon and performed ileo-ascending anastomosis. Patient was on parenteral fluid and antibiotics for first four post operative days. Sips of water allowed on fifth post operative day. The post operative period was uneventful and he discharged on 8th post operative day. He complained about altered bowel habit in form of watery diarrhoea for the first two months after surgery. Patient remained asymptomatic in follow up period of two years. On histopathological examination the specimen grossly forty five centimeter in length, comprised of terminal ileum, caecum and ascending colon. The lead point was 6 cm x 4cm x 4cm (Figure-3), cut section was grayish white in colour without evidence of necrosis or haemorrhage. Microscopically it showed the features of GIST.

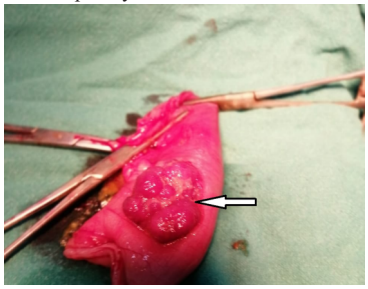

Figure-3: Showing a polypoidal growth as a lead point (white arrow)

DISCUSSION:

Intussusception is most commonly encountered in children and has been reported to be the most common abdominal emergency in early childhood, with adults accounting only for about 5% of all the cases [3]. The most common cause of bowel obstruction in children is intussusception after pyloric stenosis [4], whereas it is responsible for only about 1% of cases in adults [5, 6]. Most of the pediatric intussusception is usually idiopathic; with only 10% of cases has an identifiable cause or precipitating pathology [7]. Viral illness such as rota virus and adeno virus causes hypertrophy of the Peyer patches which can lead to intussusception. Buettcher et al found a seasonal variation of intussusception that correlated with seasonal variation of viral gastroenteritis [8]. In contrast to pediatric etiologies, adult intussusception is associated with an identifiable cause in 90% of symptomatic cases with an idiopathic cause in only 10% of cases [6, 9]. The benign causes of non idiopathic adult intestinal intussusception are lymphoid hyperplasia, lipoma, leiomyomas, hemangiomas, and polyps. Intussusception in adults is usually seen in the sixth decade with no gender predominance. The common malignant causes of small bowel intussusception include adenocarcinoma, primary leiomyosarcoma, GIST tumors, carcinoid tumors, neuroendocrine tumors, lymphomas and sometimes metastasized malignant melanoma. Colonic intussusception less commonly occurs in adults and comprises only 20 to 25% of all intussusceptions in most reported case series [6-10]. As colon malignancy is common than small bowel, the most common malignant cause of colonic intussusception is primary colonic adenocarcinoma. The most common benign cause is colonic lipoma. About 65% of adult intussusception is associated with malignancy [11] and therefore conservative approach such as radiologic decompression is not addressed in adults. Classical triad of symptoms of intussusception is not seen in adults. The most common presenting symptom is abdominal pain [12,13] with associated symptoms consistent with partial obstruction: nausea, vomiting, constipation, obstipation, gastrointestinal bleeding, or bloating. In our case series all three patient presented with pain abdomen and vomiting. Third case had constipation also. Most common radiological investigation for obstruction is plain x-ray of abdomen but in many studies more than 20% of patients with intussusception had negative plain films [14]. The sensitivity and specificity of ultrasound in diagnosing intussusception approaches nearly 100% in experienced hands, especially in children than adults [15]. Computerized tomography is the investigation of choice to diagnose adult intussusception. It can not only comment on the lead point but also on vascularity of bowel of intussusceptent. Since etiology of intussusception in children is different from adults hence management also differ. The most common type in children is Ileocolic intussusception which can be successfully reduced by ultrasound-guided or fluoroscopic pneumatic or hydrostatic enema, and it is successful in 85 to 90% of cases [16]. However reduction of intussusception in adult is not successful and recurrence is very common. We tried conservative management in first two cases but they recurred. In third case we reduced the intussusception and fixed it but it also get recurred. All the three cases underwent resection and anastomosis. In first case we got hyperplastic adenoma and in third case we got intestinal GIST on histopathological examination. There is controversy regarding management. On reviewing various article we observed a golden rule to proceed confidently for surgery. These are the conditions which should be definitely managed surgically - colocolonic or ileocolic intussusception, intussusception with associated signs or symptoms of clinical obstruction and intussusception with a lead point mass appreciated on cross-sectional imaging studies. Preoperative colonoscopy can be done for colocolonic or ileocolic intussusception to confirm the presence of pathology and or malignancy. Small bowel intussusceptions without lead point mass and short affected segments of length less than 3.5 to 3.8 cm in several series—expectant management can be employed [17-19]. Expectant management requires serial clinical and imaging evaluations to ensure resolution. Sometimes even on best modalities of expectant managements the condition of patient not improves and requires surgical management. Conservative management sometimes lead to bowel ischemia and increase the morbidity and mortality of patient. Sometimes stage of malignancy upstaged on conservative management and causes distant metastasis. On our experiences and review of literatures we conclude that adult intussusception should be managed surgically rather than conservatively.

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. Noble I. Master surgeon: John Hunter. New York: J. Messner, 1971: 185
3. A. Marinis, A. Yiallourou, L. Samanides, N. Dafnios, G. Anastasopoulos, I.Vassiliou, T. Theodosopoulos, Intussusception of the bowel in adults: areview, World J.

Gastroenterol. 15 (4) (2009) 407–411.
4. Lloyd DA, Kenny SE. The surgical abdomen. In: Walker WA, Goulet O, Kleinman RE, et al, eds. Pediatric Gastrointestinal Disease: Pathophysiology, Diagnosis, Management. 4th ed. Ontario, Canada: BC Decker; 2004:604
5. M. Waseem, H.K. Rosenberg, Intussusception Pediatr. Emerg. Care 24 (11)(2008) 793–800.
6. T. Azar, D.L. Berger, Adult intussusception, Ann. Surg. 226 (2) (1997) 134–138.
7. Begos DG, Sandor A,Modlin IM. The diagnosis andmanagement of adult intussusception. Am J Surg 1997;173(2):88–94
8. Buettcher M, Baer G, Bonhoeffer J, Schaad UB, Heininger U. Threeyear surveillance of intussusception in children in Switzerland. Pediatrics 2007;120(3):473–480.
9. Zubaidi A, Al-Saif F, Silverman R. Adult intussusception: a retrospective review. Dis Colon Rectum 2006;49(10):1546–1551
10. Wang LT, Wu CC, Yu JC, Hsiao CW, Hsu CC, Jao SW. Clinical entity and treatment strategies for adult intussusceptions: 20 years' experience. Dis Colon Rectum 2007;50(11):1941–1949
11. HaasEM, EtterEL, EllisS, TaylorTV. Adult intussusception. Am JSurg 2003;186:75e6
12. Mrak K. Uncommon conditions in surgical oncology: acute abdomen caused by ileocolic intussusception. J Gastrointest Oncol 2014;5(4):E75–E79
13. Sarma D, Prabhu R, Rodrigues G. Adult intussusception: a six-year experience at a single center. Ann Gastroenterol 2012;25(2):128–132
14. Weihmiller SN, Buonomo C, Bachur R. Risk stratification of children being evaluated for intussusception. Pediatrics 2011;127(2): e296–e303
15. Wiersma F, Allema JH, Holscher HC. Ileoileal intussusception in children: ultrasonographic differentiation fromileocolic intussusception. Pediatr Radiol 2006;36(11):1177–1181
16. Lioubashevsky N, Hiller N, Rozovsky K, Segev L, Simanovsky N. Ileocolic versus small-bowel intussusception in children: can US enable reliable differentiation? Radiology 2013;269(1): 266–271
17. Rea JD, Lockhart ME, Yarbrough DE, Leeth RR, Bledsoe SE, Clements RH. Approach to management of intussusception in adults: a new paradigm in the computed tomography era. AmSurg 2007;73(11): 1098–1105.
18. Lvoff N, Breiman RS, Coakley FV, Lu Y, Warren RS. Distinguishing features of self-limiting adult small-bowel intussusception identified at CT. Radiology 2003;227(1):68–72
19. Jain P, Heap SW. Intussusception of the small bowel discovered incidentally by computed tomography. Australas Radiol 2006; 50(2):171–174