



A CASE OF ILEO-CAECAL INTUSSUSCEPTION

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ABSTRACT

Acute intussusception is the condition in which one portion of the gut invaginates into an immediately adjacent segment almost invariably from proximal to distal. 15 year old boy presented to surgery casualty with right sided abdominal pain, clinical examination revealed right lower abdominal guarding and rigidity but no mass was palpable. USG abdomen showed an intussusception intraoperatively there was an ileo caecal intussusception with Meckel's diverticulum as lead point. Reduction of intussusceptions was done and ileal resection and end to end anastomosis was done, post op period was uneventful. Meckel's diverticulum is one the common cause of intussusceptions in older children.

Key Words: Meckel's diverticulum, Intussusception

CASE REPORT

15 Year old male patient from malappuram (fig 1), presented to our surgery casualty with right sided abdominal pain and vomiting 1 day duration. There was no h/o a/c appendicitis no h/o of TB and no h/o abdominal pain in the past. Clinical examination revealed PR 110/mt, BP 100/70 mmhg on abdominal examination no visible mass was seen but tenderness, rebound tenderness and localised guarding was there in right lower abdomen. No mass was palpable clinically. B/L inguinal region is normal, testis and external genitalia normal, no cervical, axillary or inguinal LNE. DRE – No mass palpable, there is no blood staining.

Investigation showed Leukocytosis TC (21000, N-82%), Hb 12mg. xray abdomen no free gas under diaphragm and there was no air fluid level (fig 2).

Usg abdomen showed – a bowel related mass lesion appears bowel in bowel appearance noted in hypogastric region possibility of intussusception with mesenteric lymph nodes in RIF. We planned a laparotomy for this patient and examination under anesthesia showed a mobile mass in RIF.

Intraoperative finding was ILEO-CAECAL Intussusception with Meckel's diverticulum as lead point (fig 3). portion of ileum which was inside the caecum was pre gangrenous (fig 4) so we proceeded for an ileal resection and end to end anastomosis. Rest of the bowel was normal, appendix was also normal.

HPR came as ischemic necrosis of intussusceptum, resected ends are viable, Meckel's diverticulum measuring 6*2*1.5 cm lined by ileal mucosa no ectopic gastric or pancreatic tissue seen (fig 5).

DISCUSSION

A/C Intussusception mostly seen in children with peak incidence between five and 10 months, in younger age group etiology is hyperplasia of Peyer's patches. In adults common causes are Meckel's diverticulum, polyps, appendix, malignancy and submucosal lipoma. ileo-colic is the most common type presumably due to abundance of lymphoid tissue related to terminal ileum and the anatomy of ileo-caecal valve. Ileo ileo colic is the second most common type, ileo ileal and colo-colic are uncommon types. colo-colic is the most common in adults

Abdominal xrays may demonstrate an elongated soft tissue mass in right upper quadrant in children with bowel obstruction proximal to it. Plain xray show a round soft tissue mass in right upper quadrant with ring like area of lucency this called Target sign(1). The appearance in USG is also known as Target sign its shows an alternating echogenic and hypoechoic bands, the echogenic bands are formed by mucosa and muscularis whereas submucosa is responsible for hypoechoic bands. Another sign in ultrasound is "pseudo kidney sign"(2) in this renal hilum is represented by mesentery and renal parenchyma is represented by edematous bowel. CT may show target sign similar in USG

Meckel's diverticulum is one of a spectrum of congenital anomalies resulting from the incomplete regression of the omphalomesenteric duct (vitelline duct). It is a true diverticulum that involves all layers of the intestinal wall that typically occurs within 100 centimeters proximal to the ileocecal valve on the anti-mesenteric border of the small intestine. Its blood supply is derived from the right vitelline artery which subsequently becomes the superior mesenteric artery. It may have a persistent connection to the umbilicus via a fibrous cord or a patent fistula. Most often it is free and isolated. Its lining may consist entirely of intestinal mucosa, but often it has heterotopic mucosa within the diverticulum. The most common type of ectopic mucosa is gastric. Other mucosal aberrations include pancreatic and colonic tissue. The majority of symptomatic patients are found to have ectopic mucosa within the diverticulum.

The vast majority of Meckel's diverticula are clinically silent. Symptomatic lesions (3) usually present before two years of age. It is often referred to by the rule of 2's; 2% of the population, within 2 feet of the ileocecal valve, 2 inches in length, two types of heterotopic Mucosa, and presentation before the age of two. There also is an increased association of Meckel's diverticulum with esophageal atresia, imperforate anus, omphalocele, Crohn's disease. There has been described a Meckel's syndrome which includes the triad of occipital encephalocele, cystic kidneys, and polydactyly of all limbs.

Major complication occurring in mekel's are (4) ulceration, perforation, bleeding, intestinal obstruction and Littre's hernia in which mekel's is the content of hernia. Intestinal obstruction can occur in many ways Volvulus of the intestine around the fibrous band attaching the diverticulum to the umbilicus Entrapment of intestine by mesodiverticular band Intussusception with diverticulum as lead point and Sticture secondary to chronic diverticulitis.

The most commonly used diagnostic modality is the technetium 99 scan (5) which is useful in detecting heterotopic gastric mucosa. It has a sensitivity of 85%, specificity of 95%, and accuracy of 90% Other diagnostic modalities include ultrasound, CT scan, barium studies, and selective angiography.

Management of incidently found mekel's is controversial when to resect and not to resect, A risk score was developed by team of surgeons from Belgium (6).

RISK FACTORS		
SEX	M	3
	F	1
AGE	<45	2
	>45	1
LENGTH OF MD	>2CM	2
	<2C M	1
FIBROUS BAND	YES	3
	NO	1

If score is more than 6 we have to do resection, in short broad based mekel's and if there is palpable mass at base we have to do resection score less than 6 no resection is needed.

CONCLUSION

Meckel's diverticulum is one of the common cause of intussusception in adults ,if there is pathological lead point in case of intussusception emergency surgery should be done ,and best method of treating a meckel's with complication is either a diverticulectomy or ileal resection anastamosis because ectopic gastric or pancreatic tissue may be present in some cases.

REFERENCES

1. Harrington L, Connolly B, Hu X et-al. Ultrasonographic and clinical predictors of intussusception. *J. Pediatr.* 1998;132 (5): 836-9. *J. Pediatr.* (link) - Pubmed citation.
2. Radiopaedia.org/articles/intussusceptions
3. Dumper J, Mackenzie S, Mitchell P, Sutherland F, Quan ML, Mew D. Complications of Meckel's diverticula in adults. *Can J Surg.* 2006 Oct. 49(5):353-7.
4. Cullen JJ, Kelly KA, Moir CR, Hodge DO, Zinsmeister AR, Melton LJ 3rd. Surgical management of Meckel's diverticulum. An epidemiologic, population-based study. *Ann Surg.* 1994 Oct. 220(4):564-8; discussion 568-9
5. [Guideline] Spottswood SE, Pfluger T, Bartold SP, Brandon D, Burchell N, Delbeke D, et al. SNMMI and EANM practice guideline for meckel diverticulum scintigraphy 2.0. *J Nucl Med Technol.* 2014 Sep. 42(3):163-9
6. Management of Incidentally Found Meckel's Diverticulum A New Approach : Resection Based on a Risk Score J. Robijn*, E. Sebrechts**, M. Miserez* *Department of Abdominal Surgery, University Hospital Gasthuisberg, Leuven, Belgium ; **Department of Surgery, General Hospital Jan Portaels, Vilvoorde, Belgium.

Pictures



Fig 1



Fig 2



Fig 3



Fig 4

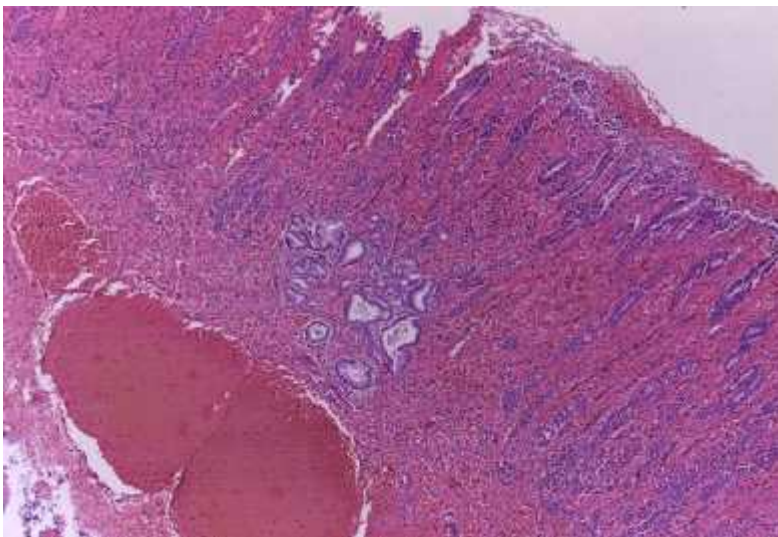


Fig 5