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Retrograde Enteric intussusception in seven years Sudanese boy, Kordufan, 2023

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*Key Words:

Intussusception, Ante grade, Retro-grade, invaginate, Enteric.

Abstract

Retrograde enteric intussusception is a rare subtype of a retrograde intussusception. Peak incidence of intussusception between five and ten months of birth, It is the most common cause of intestinal obstruction in infants. Barbette is a first surgeon described the intussusception in1674 , Wilson was the first surgeon treated the disease surgically in 1831 and Hirschsprung is the first surgeon reported the technique of hydrostatic reduction in 1876 and in 1905, after monitoring a series of 107 cases, he reported 35% mortality attributable to intussusception. Patient may present with colicky abdominal pain, red or jelly stool, vomiting and constipation. On examination the physician may found sings of dehydration, pain, palpable sausage shaped abdominal mass and on DRE there is bloody or jelly stool. Imagine of choices in patient with intussusception are Barium enema which may show claw hand, ultrasound which may show target singe and CT scan is useful in an equivocal case. Management of patient of intussusception includes Resuscitation and hydrostatic reduction or surgical resection.

Materials and methods: Materials of the current study include history, physical examination, imaging's and Intraoperative pictures. Van couver method used in this study.

Result: Presentation of retrograde enteric Intussusception is like that of antegrade type. Also the treatment same as antegrade intussusception but sometimes may need alternative treatment.

Discussion: The current study reports the first case of retrograde enteric Intussusception in a seven-year-old boy in AL- Nohood university hospital in 2023. In compare and contrast this case has no leading point or risk factors and is presented with typical clinical picture of antegrade Intussusception.

The statement of the problem: The study aims to investigate Retrograde Enteric intussusception to provide effective solutions.

The objective of the study: To provide professional medical solutions for problems and to enable doctors to avoid the surgery risks and medical complications.

Introduction and historical background

Retrograde intussusception (RI) is a retrograde invagination of the distal segment of the intestine into the lumen of the proximal intestinal. Barbette was the first surgeon to describe the intussusception in 1674, Wilson was the first surgeon treated intussusception surgically in 1831 and Hirschsprung is the first surgeon to report the technique of hydrostatic reduction in 1876[1]. In 1905, after monitoring a series of 107 cases, he reported a 35% mortality. Regarding a retrograde type Bettman and Baldwin were reviewed the literature up to 1933 and found 33 cases [2]. In patient post Roux en Y Gastric bypass

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aretrograde intussusception was reported in less than 100 times until 2016[3]. Adams and Deben ham both reported cases of retrograde gastric intussusception with recovery, also Becker was recorded a similar one in which the intussusceptions measured 18 inches [4]. In 1954 the first case of retrograde intussusception after total gastrectomy was reported [5]. In general post gastrectomy intussusception antegrade type occurred early and retrograde type raised late in the postoperative period [6]. Post Roux en Y gastric bypass retrograde intussusception predominantly seen in females (80% to 90%) at 4th to 5th decade of age [7]. Roux Stasis Syndrome is a poor gastric emptying, abdominal pain and nausea vomiting that are elicited postprandial and accordingly it's considered the most rational factor. All patients with roux en Y gastric bypass are at risk of this syndrome [8]. The incidence of retrograde enteric Intussusception is 0.07–0.6% [9]. Enteric retrograde intussusception may be associated with; round warms infection, polyps, secondary melanoma, diverticulum, complication from Roux_en_Y gastric bypass and it may occur with unknown etiology [10]. The gold standard for diagnosing intestinal intussusception is computed tomography, but the surgery remains more confirmative [11]. Plan of treatment of retrograde intussusception depends on the state of in intussuscepted intestine simple reduction with or without plication is reasonable if there is no necrotic tissue [12].

Case presentation

Seven years old boy presented by sudden colicky abdominal pain, jelly stool and vomiting. His systemic review is clear and he has no chronic illness, history of trauma or surgical operation. He had been started formula milk since the second day birth. He passed normal milestone in comparing with his brothers. Also he has no family history of similar condition. On General examination he was ill in pain with average weight and height in comparing with his similar ages. He has no fever. His pulse was 120 beat per minute regular. Blood pressure was 140/80 mmHg patient not pall or jaundice. On abdominal examination by inspection; abdominal cavity was normal and move with respiration, umbilicus is central, there were no surgical scars or distended veins and hernia orifices were intact. By superficial palpation; there was no tenderness and normal abdominal temperature and there was on superficial mass. In deep palpation, there is no palpable mass. On DRE there was empty rectum temperature and there were no tenderness or mass. Resuscitation was done immediately at and emergency room of Al-nuhood university hospital. Ultrasound was done showing target singe.

Intraoperative findings are of great significance as they shed light over the issue in inconclusiveness way this to a larger extent help doctors to take the proper decision concerning the present case, then this can be Generalized to provide the best medication for similar cases. As of the right transverse supra umbilical incision the researcher found that there is anti grade small bowel intusussception about fifty cm frome ileocecal valve simple reduction was done then there was retrograde grade small bowel intusussception proxmialy about seventy cm from DJ no palpable inraluminal mass no other abnormality apart from Lymphadenitis.

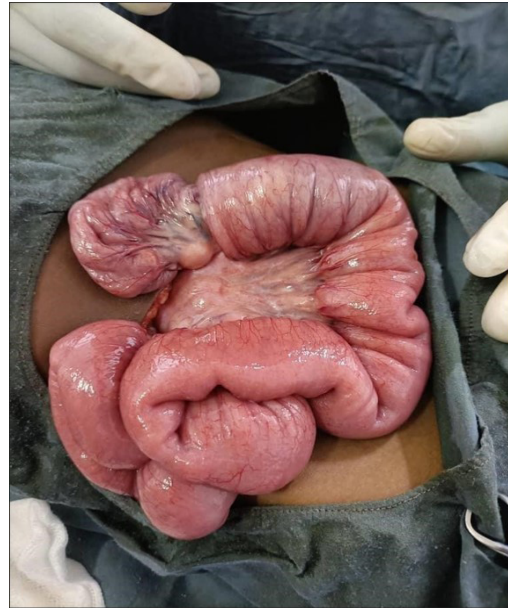

Figure 1: *Showing antigrade Entericintu susception in 7th years old boy.*

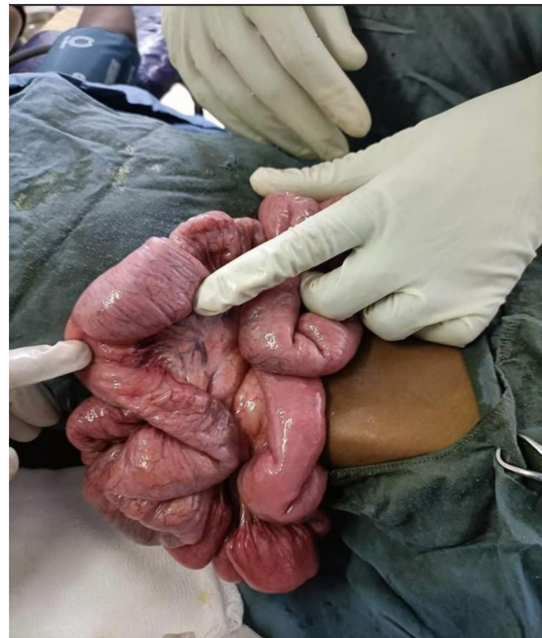

Figure 2: *Showing Retrograde Enteric intussusception in 7th years old boy.*

Result

Presentation of retrograde enteric Intussusception is like that of antegrade type. Computed Tomography is agold standard for diagnosis, but the surgery remains more confirmative and can-do resection and anastomosis as well.

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Table 1: *Showing Types of Retrograde intussusception & its associated risk factors [13].*

Types of retrograde intussusception	Associated risk factors/ Etiology
Gastro-esophageal	Hiatal hernia[26] Achalasia[27] Congenital obstructing lesions: malrotation with Ladd's bands, superior mesenteric artery syndrome, anular pancreas[26] Eating disorders complicated by moderate to severe intractable obesity[26] Physical exertion[26] Idiopathic
Duodeno-gastric	Complication from placement of gastrostomy tube[20]
Duodeno-deuodenal	Complication of duodenal ulcer[28]
Jejuno-duodenal	Complication from duodeno-jejunostomy[7] Complication from placement of gastrostomy tube[9] Polyp[10] Jejunal duplication cyst[11]
Enteric	Idiopathic[29] Foreign bodies : roundworm[29] Neoplasms: polyp, secondary melanoma[29] Meckel's diverticulum[29] Complication from Roux-en-Y gastric bypass[30]
Ceco-ileal	Neoplasms: lymphosarcoma, adenocarcinoma[29]
Colonic	Neoplasms : benign polyp, malignant papilloma, pedunculated lipoma[29]
Jejuno-gastric	Complication from gastrojejunostomy and Bilroth II reconstruction[31] Complication from gastrostomy tube[4]

Discussion

The current study reports the first case of retrograde enteric intussusception in seven years old boy in AL-Nuhood university hospital in 2023. In compare and contrast post Roux en Y gastric Bypass retrograde intussusception predominantly occurred in fourth and fifth decade of age, occurred early postoperative with non-specific symptoms of intussusception and the cause may be RouxStasis Syndrome, but in this study a case is seventh year of age boy presented with typical symptoms and signs of antegrade intussusception without risk factor and there was no leading point appeared during the operation. In both cases surgery was needed to confirm the diagnosis. In conclusion aretrograde enteric intussusception present with typical symptoms and signs of antegrade intussusception. Surgery is necessary to confirm the diagnosis and treatment like that of antegrade intussusception. Intervention was just a surgical resection and anastomosis without application or alternative treatment like that of post Roux en Y gastric bypass and post gastrectomy because there was no leading appeared.

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