Case Report

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Surgery Section

Waugh's Syndrome: Blessing in Disguise

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ABSTRACT

Waugh's syndrome is the association between intestinal malrotion and intussusceptions. We report a case of Waugh's syndrome in a one year old child who presented to us with acute bowel obstruction and bleeding per rectum. Due to malrotation, there was easy prolapsing of ileocolic region into the nonfixed ascending colon and the intussusceptum advanced into the descending colon and rectum without compromising vascularity of the bowel. In most of the cases the intussusceptum advancing into the rectum is associated with bowel gangrene even when ceacum is mobile. But in our case, mobile caecum with malrotation proved to be blessing in disguise in preventing such a complication. A Meckel's diverticulum was also an incidental finding in this case. Waugh's syndrome is missed in cases of close reduction of intussusception and may be a reason for recurrence. Though a rare entity, the probability of Waugh's syndrome should be kept in mind during surgery, during hydrostatic reduction of intussusceptions, and in case of recurrent ileocolic intussusceptions.

Keywords: Intestinal malrotation, Intussusception, Meckel's diverticulum

CASE REPORT

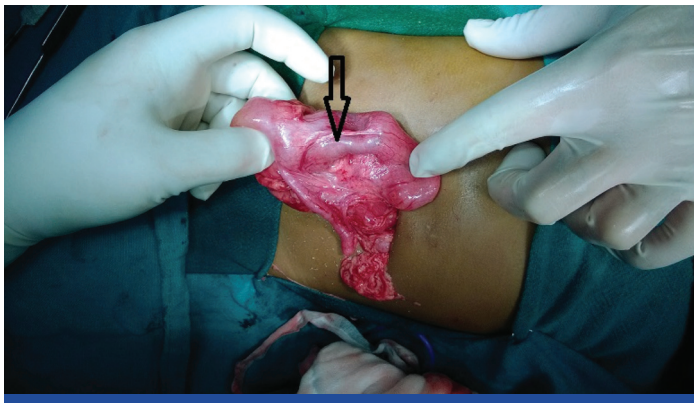
A One year old male infant was brought to the emergency room with pain abdomen, vomiting and bleeding per rectum of one day duration. On examination he appeared dehydrated, had tenderness all over the abdomen with rebound tenderness in lower abdomen. The abdomen was also distended with decreased bowel sound but no palpable mass found. On digital rectal examination an intra luminal mass was felt in the rectum. On nasogastric aspiration, bilious fluid was aspirated. All biochemical parameters were within normal limits except for leucocytosis. Ultrasound of the abdomen was suggestive of ileocolic intussusception. Patient was adequately hydrated and was taken up for exploratory laparotomy with a preoperative diagnosis of ileocolic intussusception with a possibility of gangrene. Upon exploration an ileocolic intussusception was found. Simple reduction of the intussusceptum was done. Hypertrophic payer's patch was noticed with viable intussusceptum [Table/Fig-1]. On further inspection of abdominal cavity malrotation of gut was found [Table/Fig-2]. Meckle's diverticulum was incidentally found which had a wide base [Table/Fig-3]. Patient underwent Ladd's procedure with appendicectomy and Meckel's diverticulectomy [Table/Fig-4]. Meckel's diverticulectomy and appendicectomy was done so that there is no diagnostic dilemma in future. Patient recovered well with no postoperative complications.

DISCUSSION

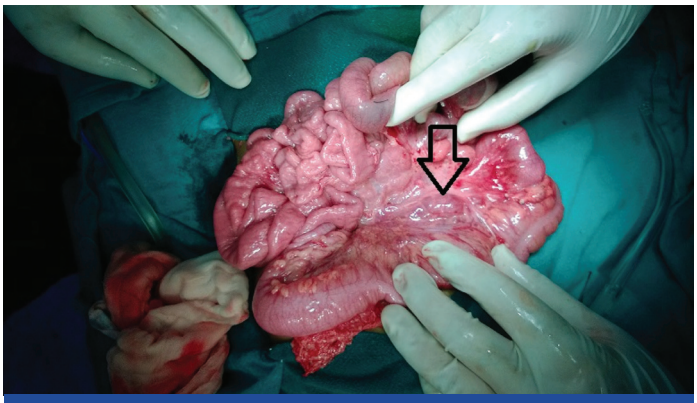
Intussusception may be associated with malrotation in a condition called Waugh's syndrome. In 1911, Waugh first described the association between intestinal malrotation and intussusceptions [1]. Since then, a very few case of infantile Waugh's syndrome have been reported in the literature [2]. We report yet another case of Waugh's syndrome, who presented with abdominal pain, vomiting and bleeding per rectum and was diagnosed as ileocolic intussusceptions. Our patient underwent exploratory laparotomy and was found to have long segment intussusception without gangrene associated with malrotation of gut.

The pathophysiology involves easy prolapsing of the ileocolic region into the nonfixed ascending colon found in children with malrotation. Because the ascending colon was not fixed to the retroperitoneum, the intussusceptum advanced into the descending colon and rectum without compromising the vascularity of the bowel.

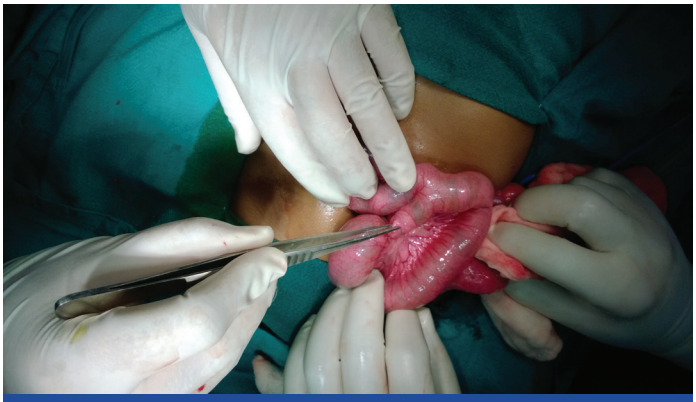
At the time of surgery for this dual condition, the diagnosis is usually made and confirmed by the location of the cecum and the pathognomic presence of the peritoneal bands from the ascending colon across the duodenum. For the majority of the reported cases, manual reduction of the intussusceptum and Ladd's procedure have been the treatment of choice. A laparoscopic approach to Waugh's syndrome has also recently been described [3]. Many authors feel Waugh's syndrome may be more common but unrecognised since treatment by enema is often sufficient for reduction and operative exploration is not performed. Our case suggest, Waugh's syndrome though a rare entity should be kept in mind during surgery, during hydrostatic reduction of intussusception and in cases of recurrent ileocolic intussusception.



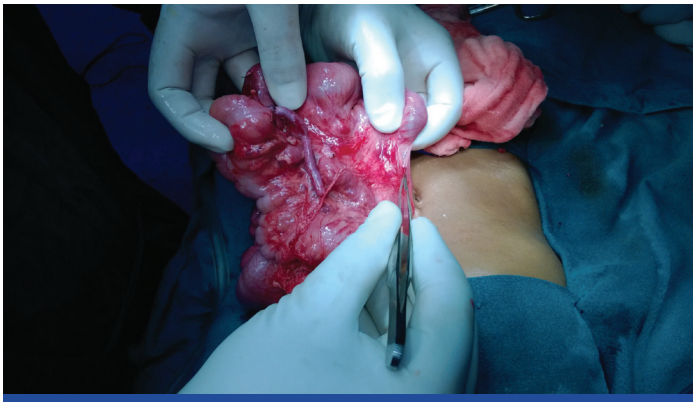
[Table/Fig-1]: Intussusceptum with hypertrophic payer's patch



[Table/Fig-2]: Malrotation of Gut with Ladd's band



[Table/Fig-3]: Meckel's diverticulum



[Table/Fig-4]: Ladd's procedure (Widening of universal mesentry)

As nonsurgical reduction is becoming more popular and successful, non-operative management of intussusception may be inadequate if a malrotation component is present and this rare entity should be kept in mind during surgery, during hydrostatic reduction of intussusception, and in cases of recurrent ileocolic intussusception.

A high degree of clinical suspicion is necessary for this dual condition. Waugh's syndrome is missed in cases of close reduction of intussusception and may be a reason for recurrence. Radiologist's awareness of this entity is helpful in guiding the clinician towards diagnosis and prevention of morbidity and mortality.

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