

# COMPOUND INTUSSUSCEPTION

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## SYNOPSIS

Three cases of compound intussusception are presented. This is a rare form of intussusception and it invariably does not respond to Barium Enema reduction. Treatment in all three cases is by immediate surgery, after failure of Barium Enema reduction in the first two. Operative reduction was successful in two cases while gut resection was necessary in the third cases. No cause was found in the first two cases while thread-worm infestation was highly implicated in the third case.

## INTRODUCTION

The term Compound Intussusception describes an enteric intussusception which pushes the ileo-caecal valve ahead of it into the colon, and thus two new outer layers are added to the three intestinal layers of the enteric intussusception. We describe three cases of compound intussusception of ileo-colic-colo-colic variety. In each case the ileo-caecal valve is the second leading point adding a colo-colic intussusception to the initial ileo-colic intussusception (Fig. 1).

## CASE REPORTS

### Case 1

A six-month old infant was admitted with complaints of vomiting, abdominal colic, passage of bloody stools and fever of one day duration. On examination, he was a well-fed and well-nourished baby with a temperature of 38 degrees centigrade. A palpable tender sausage-shaped mass was found in the upper abdomen extending to the left flank. Per rectal examination revealed classical red currant mucoid stools. The intussusception was confirmed by Barium Enema, and attempts to reduce it were unsuccessful. A laparotomy was performed. A compound intussusception consisting of an ileo-colic intussusception within another colo-colic intussusception with the ileo-caecal valve as the

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Fig. 1

second leading point was found. The ileo-colic intussusception had reached the recto-sigmoid junction. The intussusception was manually reduced with difficulty. The small intestine was congested but viable. Appendicetomy was performed. The patient had an uneventful post-operative recovery.

#### Case 2

A six-month old baby girl was admitted with complaints of vomiting and passage of bloody stools of one day duration. There was no abdominal pain. On examination, the patient was afebrile. A sausage-shaped mass was again palpable on the upper abdomen and per rectal examination revealed red currant jelly stools. The intussusception was confirmed by a Barium Enema and attempts to reduce it hydrostatically were unsuccessful. A laparotomy was performed. An ileo-colic colo-colic compound intussusception was strangulated appendix was found. The intussusception was reduced with great difficulty. The small intestine was again congested but viable. Appendicetomy was performed. She too had an uneventful post-operative recovery. No leading points were found in both these cases.

#### Case 3

The third case is a four year old malnourished Malay boy who was admitted with complaints of diarrhoea and passage of blood-stained stools and mucus for two weeks, followed by abdominal

distension, vomiting and fever for ten days, and finally paraumbilical colicky pain of one day duration. Clinical examination revealed a severely dehydrated and emaciated febrile boy who was critically ill with gross abdominal distension and marked visible peristalsis. A mass was palpable over the left side of the abdomen. The patient was resuscitated, fluid balance was restored and electrolyte imbalances were corrected. A laparotomy was performed. An ileo-colic intussusception within another colo-colic intussusception was found. The intussusception was incompletely reduced, and a limited right hemicolectomy with ileo-transverse-colostomy was done. The ileo-colic resection was done for irreducible non-viable intussusception. Post-operatively, he developed diarrhoea, abdominal pain and distension. He was re-explored and a recurrent ileo-ileal intussusception was found. The ileo-transversecolic anastomosis was intact. A small perforation was found at the splenic flexure colon which was exteriorised as a colostomy. Thread worm infestation was still present. The colostomy was subsequently closed and patient recovered eventually after a stormy period of one month in the intensive care ward.

#### DISCUSSION

The ileo-colic intussusception is the most common variety and is usually easily reduced by Barium Enema. If barium reduction fails, a simple laparotomy can be performed and the intussus-

ception reduced with less difficulty and minimum complications. The compound intussusception is a more complicated form and begins as a benign process of the small intestine and at the ileo-caecal valve and eventually produces a second invagination so that there are five cylinders or layers of intestinal wall.

In the first two cases, no leading points were found. They are classified as Primary Idiopathic Intussusception. In the third cases, thread worm infestation was the most likely cause. The worms irritated the mucosa causing severe debilitating diarrhoea and intestinal hurry thus predisposing to the formation of intussusception. There is no direct relation between the time factor and the occurrence of compound intussusception. In the first two cases, the symptomology was of one day duration while the third case has a long history of at least two weeks.

It is interesting to note that hydrostatic reduction was unsuccessful in the first two cases, while the third case contraindicated its use. The treatment of choice is therefore surgical reduction or surgical resection if necessary. The third case illustrates an important feature of compound intussusception which recurred post-operatively despite adequate reduction and limited right hemicolectomy. This contradicts the views held

by Soper (1964), Herman (1960) and Sarason (1955) that an ileo-colic resection invariably prevents recurrent intussusception.

### SUMMARY

Three cases of compound intussusception are described. This is to highlight the presence of this rather rare form of intussusception which is more complicated and does not respond to hydrostatic reduction. Surgery is invariably necessary and life-saving. Despite a ileo-colic resection, a recurrent intussusception can still occur post-operatively and this contradicts the former views held by Soper, Herman and Sarason.

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