Case Series
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Acute Intussusception Following a Pull-Through Operation for Hirschsprung Disease

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Summary

Acute post-operative intussusception is a rare. This is a report of two cases of acute intestinal intussusception were observed in two children aged 14 months and 2.5 years following operation for Hirschsprung's disease. The first signs appeared at the tenth and the fifth post operative day after a satisfactory post-operative period. These signs were not evocative (pains and more or less stopping of the transit, vomiting).

Manuel reduction was effected in both cases with uneventful recovery.

The signs of premature post-operatory occlusion happen in the two weeks of the intervention in hirschsprung disease must help to mention the diagnosis of post-operative intestinal invagination.

Key words: Post-operative intussusception, Hirschsprung's disease, occlusion, children.

Introduction

Acute post-operative intussusception is a rare complication of paediatric abdominal surgery, with a frequency 0.08% in all laparotomies[1]. It represents 5 to 15 % of all causes of intestinal obstruction. It occurs in three types of surgery[2,3] namely, surgery for gastro oesophageal reflux disease, retroperitoneal surgery (notably for malignant tumours like nephroblastoma) and after resection of the rectosigmoid region[2,3]. In over 55 cases of Hirschsprung's disease operated upon at our centre, we recorded 2 cases of post operative intusssusception. By reporting these two cases, we wanted to show the relative frequency of postoperative intussusception following pull-through operation for Hirschsprung's disease.

Case 1

A 2½ years old girl was admitted for complaints of abdominal distension and constipation since birth. She passed stool only after the administration of enema. Physical examination findings were those of bad general condition with respiratory distress, body weight of 8kg and gross abdominal distension. Abdomen was soft and no organ was palpable. There was a hard abdominal mass which was consistent with fecaloma in the left iliac fossa. Digital rectal examination confirmed the fecaloma.

Barium enema suggested a rectosigmoid Hirschsprung's disease. Hirschsprung's disease was confirmed by histology. She underwent a rectal wash out with paraffin oil and normal saline. Her preoperative investigations were uneventful . She had a Duhamel's pull through using 2 kocher forceps for the enterotomy. The post-operative course was uneventful; she opened bowel on the 3rd day and commenced oral feeding on the same day.

Ten days later she developed a abdominal pain which necessitated exploratory laparotomy. At operation an ileo-ileal intussusception was discovered, with viable bowel. The intussusception was reduced manually with ease. The post-operative period was uneventful and she was discharged on the 5th post-operative day in satisfactory condition. She has remained well after 5 years of follow-up.

Case 2

A 14 months old boy was admitted for delayed passage of meconium. He only passed stools after enema with normal saline and paraffin oil. Barium enema was consistent with Hirschsprung's disease,

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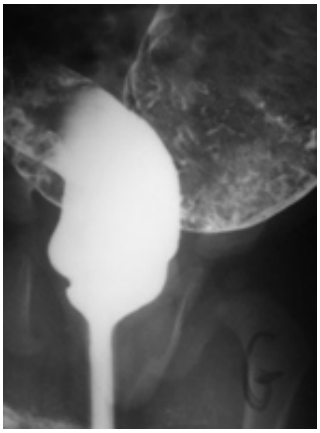


Fig.1: Barium enema of patient number 2 showing a "transition zone"



Fig.2: Sonogram of patient number 2 showing the target sign on transverse section

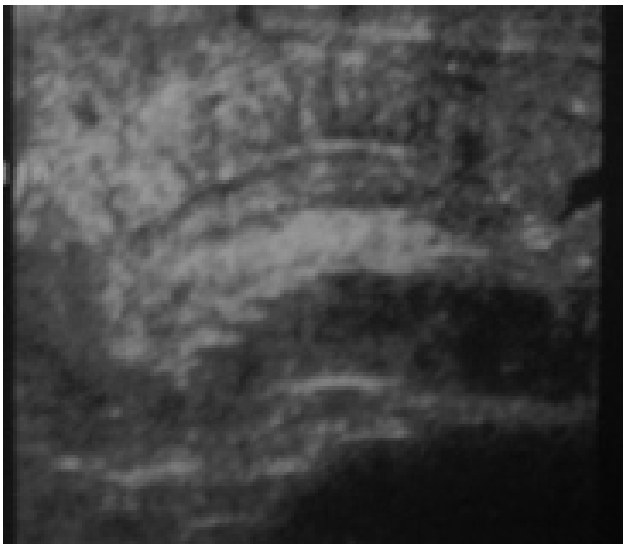


Fig.3: Sonogram of patient number 2 showing the pseudokidney sign on longitudinal section

with the transition zone at the rectosigmoid junction [Fig.1]. Hirschsc-prung's disease was confirmed by histology.

Pre-operative investigation was essentially normal. He had a Swenson's procedure. He opened bowel on the 2nd post-operative day and oral feeding was commenced a day later. On the fifth post operative day, he developed bilious vomiting, and was very pale with haemoglobin of 5g/dl (due to loss of blood during operation). Abdominal ultrasonography showed a concentric ring of intussuceptum within the intussuscipiens (Target sign) on transverse view [Fig. 2], and the pseudo-kidney sign on longitudinal section [Fig.3], which were typical of intussusception.

He was resuscitated and operated a day later. The intra-operative diagnosis was an ilio-ileal intussusception, with viable bowel. The intussusception was reduced manually with ease.

Post-operatively, he fared well and was discharged on 5th post-operative day. He has remained well after two years of follow-up.

Discussion

Acute post-operative intussusceptions represents 5 to 15% of all postopera-tive intestinal obstruction requiring an operative re-look, and 1.4% to 15% of all intussusceptions[1,2]. This type of intussuception occurs in all ages in childhood, and usually affects the small bowel in 4% of this type of intussusceptions, bowel is resected[2,3].

The clinical signs are non-specific, but abdominal ultrasonography usually confirms the diagnosis; when the target picture is small, this indicates a small bowel involvement[2,3].

Post-operative intussusception had been reported after many surgical proce-dures on the abdomen, thorax and even neck[4,5].

The pathogenesis of post-operative intussusception is not clearly defined[2-4]. Manipulation of small bowel producing spasm, oedema, or hypoxia has all been implicated[2]; but the manipulation of small intestine in procedures for Hirschsprung's disease is minimal. Electrolyte derangement has also been implicated as a possible contributory factor, on the ground that electrolytes disorder has a negative affect on intestinal motility. Long period of procedures can cause electrolytes disorders, which together with

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L'invagination Intestinale Aiguë Postopératoire après traitement chirurgical de la maladie de Hirschsprung

Résumé:

L'invagination Intestinale aiguë post opératoire est rare. La présente étude rapporte deux cas d'invagination intestinale aiguë post opératoire, chez 2 enfants âgés de 14 mois et 2 ans et demi, opérés pour maladie de Hirschsprung. Les premiers signes ont été observés au 10ème et au 5ème jours postopératoires après des suites simples. Ces signes n'étaient pas évocateurs (Douleurs abdominales, arrêt des matières plus ou moins net, vomissements). Ces 2 enfants ont été opérés, une réduction manuelle du boudin d'invagination a été réalisée ; les suites opératoires ont été simples. Les signes d'occlusion intestinale survenant dans les 2 semaines suivant une intervention chirurgicale pour maladie de Hirschsprung, devraient faire évoquer une invagination intestinale aiguë postopératoire. ***Mots Clés:*** Invagination intestinale aiguë postopératoire, Maladie de Hirschsprung, occlusion, enfants.

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