Prolapsed Intussusception in Children: A Report of 4 Cases

*Ngom G.[1], Fall I.[1], Sankale A. A.[1], Konate I.[2], Sagna A.[1], Ndoye M[1]

Units of [1]Pediatric Surgery and [2]Surgical Clinic,
Aristide Le Dantee Hospital, Dakar. University Cheikh Anta Diop, Dakar

Abstract

Background: Prolapsed intussusception is defined as the invagination of an intestinal segment into the adjacent segment to it, with exteriorization of the head of intussusception through the anus.

Patients and Methods: Four children were diagnosed in the Emergency Unit of "Hôpital Aristide Le Dantec" of Dakar.

Results: The average time of presentation to hospital was 45 days (21 days -95 days). On digital rectal examination, a sulcus was felt between the rectal wall and the protruding mass. The diagnosis of intussusception was made on clinical basis. All children had surgery through a large abdominal incision. Findings were that of ileo-anal intussusception, the presence of a long mesentery and a failure of fixation of the right colon. A wide bowel resection plus enterostomy in two patients and a simple reduction with appendectomy also in two patients were performed. One patient died 2 days following a wide bowel resection.

Conclusion: Prolapsed intussusception should not be confused with, but should always be considered as a differential diagnosis of, rectal prolapse.

I***ndex words:*** prolapsed intussusception, children

Introduction

Intussusception is one of the common causes of acute intestinal obstruction in children and infants. In developed countries, the diagnosis is often made earlier and children may benefit from hydrostatic reduction in most cases[1,2]. In some African countries and particularly in Senegal the diagnosis is still made late, sometimes when complications had already set in, resulting in high rate of mortality[3,4].

The aim of this paper was to report our experience in the management of prolapsed intussusception, in 4 Senegalese children.

Patients and Methods

There were 4 children, 2 females and 2 males, with an average age of 12 months.

There were referred to the surgical emergency unit of Aristide Le Dantec Hospital Dakar for management of rectal prolapse. The average period between the onset of symptoms and the referral was 45 days (21 days 95 days). These children were admitted in a pediatric department for an average period of 21 days where they were managed as gastroenteritis or dysentery.

The history taking from parents on the event prior to the prolapsed mass revealed that this was preceded by colicky abdominal pain associated with vomiting and rectal bleeding.

Clinical examination of children showed wasting, abdominal distension and an intussusception prolapsing through the anus. On digital rectal examination, a sulcus was felt between the rectal wall and the intussusceptum.

The management included resuscitation and surgery done through anal and abdominal approach. The reduction of intussusception started at the anal level, then followed up to the rectum.

Correspondent: Gabriel Ngom, BP: 6863 Dakar-Etoile,
Tel: 860-27-02 or 552-00-80;
e-mail: gngom2004@yahoo.fr

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Table 1:
Differences between a prolapsed intussusception and a rectal prolapse.

	Prolapsed Intussusception	Rectal Prolapse
Consistency	Firm	Soft
Outline	Irregular, bosselated	Regular
Color	Plum	Red
Peri-anal fold	Absent	Present



Fig. 1: Rectal Prolapse

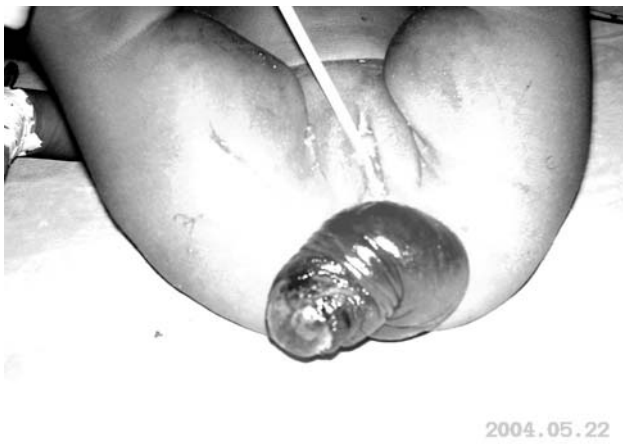


Fig. 2: Prolapsed Intussusception

After this a laparotomy was performed to complete the reduction.

Abdominal findings were that of a long mesentery with failure of fixation of the right colon and mesenteric lymph nodes enlargement in all patients. Two children presented an extensive intestinal necrosis. We performed a simple reduction with appendectomy for 2 children in whom the bowel was viable. We performed appendectomy because from our experience most of the time the appendix is involved in the intussusception. For the other two children who had bowel necrosis we performed intestinal resection with an enterostomy. Bowel continuity was established a month later.

During post-operative period one child died on day 2 following an extensive intestinal resection. The 3 other children did well.

Discussion

Prolapsed intussusception is rarely reported in the literature[5,6]. The commonly reported form of intussusception is the ileo-caeco-colic type[7,8]. This form of intussusception represents only 2% of all intussusceptions[7]. Based on the anatomy, two conditions are necessary for intussusception to protrude through the anus: a long mesentery and failure of the fixation of bowel to the posterior abdominal wall as was discovered in our patients.

Apart from the usual intermittent colicky abdominal pain associated with intervals of complete resolution that characterizes intussusception, abdominal ultrasonography could also help in the diagnosis of intussusception[9,10]. At the stage of prolapsed intussusception, the differential diagnosis is rectal prolapse. However some peculiar signs will help in differentiating the two entities (table I and figure 1 & 2). In this report the delayed diagnosis could explain the frequent intestinal necrosis and the high mortality rate observed. When the diagnosis is late, hydrostatic reduction is contra-indicated because of the high risk of bowel perforation. The only accepted form of management is surgery. Bowel resection associated with enterostomy or immediate end-to-end anastomosis can be performed.

We like to conclude that prolapsed intussusception is a rare but avoidable complication of intussusception, and could be confused with rectal

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prolapse. Early presentation and intervention are necessary to prevent this complication.

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