

Acute intussusception in children seen at El Obeid Hospital, Western Sudan. El Bushra Ahmed Doumi

Abstract:

Objectives: To study the pattern, clinical presentations and management outcomes of childhood intussusception seen at El Obeid Hospital, Western Sudan.

Patients and Methods: This is a retrospective descriptive study. The medical records of children who presented with intussusception during 2004 to 2007 at the University Surgical Unit, in El Obeid Teaching Hospital were reviewed. The data were analyzed for gender, age, clinical presentations and treatment outcomes.

Results: There were 24 children, males were 14. Infants constituted 71% of the study group. Patients came from rural areas, mainly during the dry season. They had their symptoms for more than 36 hours, were seen and initially treated elsewhere and only 41% presented with classical clinical features.

All patients were operated and found to have ileocolic intussusceptions, with no pathologic lead point. 54.2% of cases had resection and anastomosis for bowel ischaemia, while in 45.8% manual reduction was done. The post-operative mortality was 16.7%.

Conclusions: Childhood intussusception was common in male infants from rural areas in the dry season. Late presentation to the surgeon necessitated major operative procedures for bowel ischaemia with considerable morbidity and mortality.

Key words: Bowel invagination, Western Sudan.

Intussusception is a term derived from the Latin intus (within) and suscipere (receive)¹. One segment of the bowel (intussusceptum) slides or invaginates into another segment (intussusciens) immediately distal to it, just like the pieces of a telescope². This telescoping often blocks the bowel. The mesentery of intussusceptum gets compressed and if not urgently treated leads to strangulation, ischaemia and gangrene. It commonly affects infants between 2 and 6 months, but can occur in other age groups³.

In this paper we report our experience with this condition in a rural hospital setting in Western Sudan.

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Patients and Methods:

This is a retrospective study of the records of 24 children with acute intussusceptions who reported to the University General Surgical Unit, in El Obeid Teaching Hospital; Western Sudan during the years 2004 to 2006.

The data were analyzed for gender, age, clinical presentations and treatment outcomes.

Results:

There were 24 children among the study group, 14 were boys (M: F ratio =1.4:1). The age distribution was between 3 months and 4 years. Infants were 71% of the cases. All patients were seen and initially treated by medical assistants, general practitioners or paediatricians before their referral to the surgical department. The symptoms were for more than 36 hours and the majority of

patients (66.7%) were from rural areas reporting during the dry season (October to June).

10 patients (41.7%) presented with the classical triad: vomiting, colicky abdominal pain with drawing of the feet up and bloody diarrhea. Six patients had palpable abdominal mass (25%), were also dehydrated, with irritability and lethargy.

All patients were offered emergency laparotomy after initial correction of fluid and electrolytes. At operation all patients were found to have ileocolic intussusceptions with varying degrees of progression of the intussusceptions through the colon. Pathological lead point was not identified in all patients. 11 patients (45.8%) with viable bowel were reduced manually. 13 patients (54.2%) had resection and anastomosis for bowel ischaemia, of whom two patients needed temporary colostomy. One patient with chest infection had burst abdomen. Four patients died post-operatively (16.7%).

Discussion:

Childhood intussusception is a serious surgical emergency, as the strangulated bowel can lead to profound morbidity and fatality. In this study infant males (71% of the cases), of rural residence were more susceptible. Infants accounted for 79% of the cases reported from Jordan⁴. We observe that patients reported in the dry season. Such prevalence was noted in Kenya⁵.

Most of the patients presented later than 36 hours to the surgeon, many of whom were under initial treatment with medical assistants and general practitioners indicating lack of awareness of the condition among health providers here and in other similar African societies^{6, 7}. Only 45.8% of the patients reported with the classical triad of vomiting, colicky abdominal pain and red currant jelly stools. Kuremu⁵ found such symptoms in 17% of his patients. Other authors reported 33%, 32% and 7.5%⁸⁻¹⁰ among their cases. Primary Health Care providers have to be aware to this, as many patients may be missed in the critical time.

We found ultra-sound scanning of the abdomen was quiet helpful to confirm the diagnosis or to increase its suspicion. That was also described by El-Adamat et al from Jordan and elsewhere¹⁰⁻¹².

Air or barium enema was not done in our hospital, due to lack of facilities. It was for the same reason that no attempt for pneumatic enema reduction was tried for any patient in this series. However, such treatment modality was described to be successful in the majority of patients by some authors¹⁰⁻¹⁶. Its implementation may avoid many unnecessary operations.

In this study all patients were offered emergency laparotomy. At operation the intussusception was found to be of the ileocolic variety. The fact that no pathologic lead point was identified and the seasonal prevalence may indicate microbial agent aetiology. The late presentation to the surgeon resulted in high rate of bowel resection (54.2%). In similar communities like ours bowel resection was performed in 33% and 39% of cases in Kenya⁵ and Tanzania respectively⁶. This could have been reduced by high suspicion of the condition and performing routine abdominal ultrasound scan to all infants presenting with colicky abdominal pain and vomiting.

The post operative mortality was 4 patients (16.7%). All deaths were within the ischaemic bowel group, for whom resection and anastomoses were done. It may be explained by the complications of late presentations and bowel gangrene. Reports from similar settings showed a mortality rate ranging from 9.4% to 25%^{5,6, 17-19}.

In conclusion: acute intussusception is not uncommon emergency in infants from rural areas, mainly in the dry season. Awareness of the condition among primary health care providers and the use of abdominal ultrasound scan may increase the diagnosis of early cases. However; operative reduction was found to be quiet safe if performed early enough before the development of critical ischaemia and gangrene.

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