

EDITORIAL

INTUSSUSCEPTION IN THE PAEDIATRIC AGE GROUP

Intussusception remains to be one of the most common surgical emergencies seen in children worldwide. However, the management of intussusception in the paediatric age group in sub-Saharan Africa has changed relatively little as compared to the developed countries. In the latter, barium enema is no longer the gold standard for non-operative treatment; contrast enemas are no longer always the preferred initial investigation to confirm the diagnosis; many of the previously espoused contraindications for surgical intervention are no longer considered valid; and finally, the place of minimally invasive surgical techniques in the management of those in whom surgical intervention is required is being established(1). This has been made possible due to early presentation and prompt accurate diagnosis using improved imaging techniques.

The situation in Africa is not promising. A recently held workshop on intussusception in children in Africa(2) revealed that the major problem in our environment is late presentation with associated complications like dehydration and electrolyte imbalance, sepsis, bowel necrosis with peritonitis and often in shock; sometimes infants present with rectal prolapse of the intussusceptum. The children are either malnourished or usually are from an impoverished family. The frequent history of preceding diarrhoea which then stops due to the intestinal obstruction from intussusception often make mothers and health-care workers initially believe that the baby is improving and therefore contributes to the late presentation/referral. If the diarrhoea is bloody and mucoid, it is often confused with dysentery or amoebiasis especially if these infective conditions are endemic in the area resulting in delayed diagnosis. Ignorance, initial visits to the traditional practitioners and social practices like use of enema with pepper as done in Cote d'Ivoire also contribute to late presentation(2). The clinical presentation is usually a triad of vomiting, abdominal pain/distension and passage of blood per rectum. The palpation of mass per abdomen is often not easy due to a distended and tense abdomen as a result of late presentation and reviews in Africa reveal in less than half the cases, the intussusceptum is palpable(2).

Seventy five percent of children present in their first year of life with peak incidence around 3-5 and 8-10 months of age(2). The aetiology in this infantile group is largely unknown though hypertrophy of Payer's patches and mesenteric adenitis due to viral infections such as adenovirus(3) have been implicated. In older children, a lead point such as a polyp may be the cause. Most studies in Africa reveal a slight male preponderance and the ileo-colic type is seen in 80% of cases(2).

Diagnosis is usually made clinically and occasionally assisted by abdominal ultrasonography. In infants presenting with clinical features of intestinal obstruction with gross abdominal distension, the diagnosis of intussusception can often only be established at laparotomy. Due to late presentation of cases and sometimes limited facilities, contrast studies are usually not done. Erect plain abdominal radiograph is only usually done to confirm presence of multiple fluid levels as evidence of intestinal obstruction. Non-surgical treatment either by barium or air enema is far from reality in our environment. This is mainly due to late presentation of cases, however, with improved facilities and closer collaboration accompanied by enthusiasm between paediatric surgeons and radiologists, it is my sincere hope that non-surgical reduction will be possible in cases presenting early and where prompt and correct diagnosis has been made. Emergency laparotomy following adequate resuscitation is still the standard treatment in our situation. Reviews in various countries in Africa reveal that, intra-operatively, bowel necrosis, perforations or failed reduction requiring bowel resection and anastomosis account for 30-60% of cases and post-operative mortality ranges from 4-27% compared to 0.7% in developed countries(2). Daneman and Navarro(4) emphasized on improved imaging aspects in ultrasonography, plain radiography and contrast enema (barium or air) as contributory to prompt and accurate diagnosis of intussusception. Abdominal radiographs is considered least useful and may be safely omitted in most children suspected of having an intussusception where sonography is also available(4). Regarding management, the same authors provide evidence that the only current absolute contraindication to attempted enema reduction is full-thickness bowel necrosis whereby the child will have features of shock (from septicaemia as distinct from dehydration) and peritonitis(5). The other indication for surgery is if a pathological lesion at the lead point has been established pre-operatively, which would then most probably be managed by minimally invasive techniques (laparoscopy). In non-operative reduction, air enema is preferred to barium as not only it has a higher success rate but also minimises peritoneal contamination in case of presence of a perforation(6). Delayed repeat enema can be successful in up to 50% of intussusception cases that were partially reduced in the first attempt provided the infant remains clinically stable with no evidence of peritonitis, however, the time interval between the enemas and number of safe repetitions remains uncertain but should not be attempted in non-specialist paediatric centres(7).

The occurrence of intussusception in infants is often preceded by history of diarrhoea and public health measures to control the latter may be useful to reduce the incidence of intussusception. Rotavirus has been found to be a leading cause of diarrhoea in infants worldwide(8), however the recent report of the Tetravalent rhesus rotavirus vaccine (RotaShield) being associated with increased incidence of intussusception in the USA poses a significant dilemma(9,10). Appropriate epidemiological studies on rotavirus infection and intussusception rates in Africa are necessary to weigh the benefits of the rotavirus vaccine if introduced which was the objective of the recent workshop in Malawi(2).

In conclusion, intussusception in children is a surgical emergency that is of major concern in our environment and efforts should be made to improve awareness leading to early referral and prompt correct diagnosis thereby minimising complications. Non-operative management preferably with air enema is recommended whenever possible as this will minimise morbidity such as post-operative pain and intra-abdominal adhesions as well as reduce mortality and cost of treatment(11).

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