tissue as in case of Ehlers-Danlos syndrome or Marfan's syndrome. But all of them cannot be explained on the basis of known defects in connective tissue. Although some as yet unrecognized inherited defect in the connective tissue may be responsible for some, the others are probably due to either unrecognised trauma or inflammatory disease. This or some other form of focal arteritis could weaken the arterial wall sufficiently to result in aneurysm formation. Hence, it is not possible in all cases to define the exact cause of aneurysm formation. Our case also belongs to this group in which exact etiological factor responsible for aneurysm formation could not be traced.

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Starvation— A Rare Cause of Intussusception in Preadolescence

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Although an extremely uncommon variety of idiopathic intussusception in adults immediately after the Mohammedan fasting seasons has been reported earlier(1), starvation has seldom been recognised as a cause of intussusception in children. A plausible explanation of intussusception due to starvation has been given on the basis of 'hyperperistalsis', a physiological factor which has not been well emphasized before in the etiopathogenesis of intussusception.

Case Report

A 12-year-old Mohammaden boy was admitted with sudden onset of abdominal pain followed by bilious vomiting and obstipation during the observance of fasting on the fourth day of the 'Ramzan' month. Clinical examination revealed a sausage shaped mass in the para-umbilical

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region and features of intestinal obstruction. The rectum was empty. Pre-operative workup included abdominal sonography which revealed classical 'multiple concentric ring sign'. Exploratory laparotomy revealed ileoileal intussusception with gangrene of bowel. Resection anastomosis was done. The resected specimen did not show any point which was subsequently confirmed by histopathology. The post-operative period was uneventful.

Discussion

In Mohammedan fasting seasons the stomach is kept empty for a long time every day. Usually children below twelve years abstain from this strict fasting. During fasting, intense hunger contractions are initiated in the gastroduodenal region and are caudally passed on along the length of the small bowel. These momentary bursts of activity are followed by periods of prolonged inertia; but during these brief periods of hyperactivity, the proximal gut invaginates into the distal gut. The exact neurohumoral factors governing the hyperperistalsis are not known. However, the 'clock' which controls the genesis of fasting front has been known to lie outside the smooth muscle, probably in the myenteric plexus. This myenteric plexus is principally under the action of parasympathetic nerves. The inhibition of sympathetic activity resulting from starvation could accentuate the parasympathetic activity and result in hyperperistalsis(2). There is evidence that one of the duodenal hormones 'motilin' is also responsible in this hyperperistalsis(3).

While discussing the etiopathogenesis of intussusception most authors have not emphasized on the contribution of hyperperistalsis in the initiation of intussusception. Raffensperger(4) has recognised that viral gastroenteritis could increase peristalsis and thereby predispose to our intussusception or cause hypertrophy of lymphoid tissue in the terminal ileum. Segmental hyperperistalsis is the most probable explanation for intussusception that occurs in the immediate post-operative period in children(4).

Direct observation of the small intestine during any abdominal operation suggests that an intussusception may be ini- tiated by a localised ring of intestinal spasm. Occasionally, one sees these localised areas of hyperperistalsis temporarily invaginating into the adjacent distal intestine. This phenomenon is frequently observed in dogs(4).

The purpose of reporting this case is to suggest the contributory role of starvation and the resultant hyperperistalsis in intussusception. This pathophysiology may issue a greater significance in the presence of specific lead points.

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