LETTER TO THE EDITOR

GASTRIC PERFORATION AND ASCARIASIS: CASUAL OR CAUSAL RELATIONSHIP?

Dear Editor,

Ascariasis is a common problem in the tropics. Poor hygienic and low socioeconomic conditions have been the main factors incriminated. Common surgical problems caused by ascaris infestation include small intestinal obstruction, volvulus, intussusception and perforation usually involving the ileum. In our environment over 70% of children are infested with ascariasis.

A 65-year old farmer presented with a 6-day history of high grade fever and shivering followed a day later by abdominal pain, progressive abdominal distension and absolute constipation and vomiting. Physical examination revealed an acutely ill looking, severely dehydrated man, afebrile (T = 36.5°C) and not pale. Pulse rate was 120/min, and blood pressure 100/80 mmHg. The abdomen was distended and there was generalised tenderness and guarding. Bowel sounds were reduced. Serum urea was 36mmol/L, HCO$_3^-$ 8mmol/L, and other electrolytes were normal. Haematocrit was 38%. Plain abdominal X-rays revealed gaseous distension and multiple air-fluid levels. There was no evidence of pneumoperitoneum.

The patient was resuscitated and intravenous antibiotics (ampicillin and metronidazole) commenced. Exploratory laparotomy 6 hours later revealed 3 litres of faeculent peritoneal fluid, fibrinoid adhesions, a 25cm-long live ascarid worm in peritoneal cavity and a pre-pyloric perforation of the stomach. The peritoneal fluid was evacuated and the perforation closed in two layers after excision of the stomach. The peritoneal cavity and a pre-pyloric perforation of the stomach were excised. Saline peritoneal lavage was done. Histology confirmed ulceration with mild inflammatory infiltrates.

The adult roundworm, *A. lumbricoides* usually resides in the small intestines without producing significant symptom. In individuals with heavy worm load, aggregation of the worm into masses can result in varied surgical abdominal conditions such as intestinal obstruction, intussusception, volvulus, ileal perforation, and hepatobiliary and pancreatic ascariasis. Out reported that besides external hernias, ascaris worm was the commonest cause of obstruction in children in Calabar. In a review of 295 cases of intestinal obstruction in south-eastern Nigerian children, ascaris was the leading cause accounting for 25%. Hassan reported 5 cases of intestinal obstruction in children aged 4 - 8 years, due to ascariasis over a 12 month period in Maiduguri, Nigeria.

Bowel perforation is thought to follow ischaemia from pressure by the mass of worms in the ileum. This view was however questioned by Efem who posited that except in confined spaces like the appendix, Meckel's diverticulum and the biliary tree, the intestine is capable of immense dilatation to accommodate up to 5000 worms without symptoms. Typhoid perforations, non-specific ulcers and anastomotic suture lines are thought to provide exit for the ascarid worm. The worm could migrate proximally into the duodenum, biliary tree and stomach, where it might be vomited or cause nasogastric tube blockade. There is no mention of perforation of the jejunum or stomach attributable to ascaris, but the propensity of the worm to explore small opening is known. In our patient, the worm may have converted a near perforation into frank perforation or the perforation occurred followed by exit of the worm into the peritoneum. The later is more likely as histology did not show evidence of chronicity in the ulcer.

References


D. Iya, A. T. Kidmas, K. Ozoilo and A. A. Sani

Department of Surgery, Jos University Teaching Hospital, P. M. B. 2076, Jos, Nigeria. E-mail: atkidmas@hotmail.com