ABDOMINAL COMPLICATIONS OF ASCARIS LUMBRICOIDES IN CHILDREN

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INTRODUCTION

Ascaris lumbricoides is a specific human helminth and children are predominantly affected. It is a manifestation of low socio- economic status and poor sanitary hygiene. Infestation by ascaris lumbricoides is very common in Turkey. In areas where ascariasis is prevalent, abdominal complications account for a significant number of admissions to the department of pediatric surgery. We have reported the history and clinical course of 28 patients with abdominal complications due to ascariasis in order to emphasize the importance of this lesion.

PATIENTS, METHODS AND RESULTS

During 1985-1990, 28 cases with abdominal complications due to ascariasis were treated at the Department of Pediatric Surgery. There were 18 males and 10 females whose ages ranged from 2 to 14 years (mean 7 years). Fifteen children (54%) had signs and symptoms of incomplete or sub acute intestinal obstruction like abdominal pain, moderate abdominal distension, minimal tenderness. Abdominal masses were present in 3. All cases with sub acute obstruction had a history of passing worms per rectum formerly. Their plain films of the abdomen showed partial obstruction. Conservative treatment consisting of nasogastric decompression, maintenance of intravenous fluid till disappearance of signs of intestinal obstruction followed by antihelminthic therapy (piperazine 50 mg/kg per oral) was given to these cases. Nine patients (32%) had signs and symptoms of complete or acute intestinal obstruction which included severe abdominal distension and tenderness plus vomiting of worms. Abdominal masses were present in two of them. Plain x-rays of the abdomen showed fluid levels as well as dilated loops of small intestine. Children with acute intestinal obstruction due to ascariasis required urgent resuscitation and surgical therapy. At laparotomy, gangrenous segment of the ileum was found in 8 and perforation of the ileum in 1 case. Ascaris lumbricoides were seen lying freely in the peritoneal cavity in the latter case. Resection and anastomosis was carried out in all of the nine cases. There were signs and symptoms of acute abdomen such as abdominal pain, tenderness in the right lower quadrant in the remaining four patients (14%). An appendectomy was performed in these cases and appendicitis due to ascariasis was found in the histopathological examinations. All patients with subacute intestinal obstruction responded to the conservative management within 24-72 hours and their symptoms disappeared. There was no morbidity and mortality in this group. Five of the nine patients with acute intestinal obstruction who required urgent surgery died. Mortality rate was 17.8%. These deaths occurred 1 hour to 4 days postoperatively because of the worm toxaemia.

COMMENTS

The roundworm ascaris lumbricoides is the commonest intestinal parasite of children in developing countries. Human infection is acquired by accidental ingestion of embryonated eggs from polluted drinking water, food or soil. The clinical manifestations depend on the location of the parasite and worm load and may be due to mechanical obstruction, a chemical lytic effect of secretory products or

irritation from disintegrating parasites and their ova[1]. The diagnosis of intestinal ascariasis usually depend on the appearance of an adult worm in vomitus or stool. Plain abdominal radiographs may show the typical whirlpool pattern in some cases with intestinal ascariasis[2,3]. All of our patients had a history of passing the worms per oral or rectum but whirlpool pattern was not seen in these cases. The most common clinical presentation, apart from passage of worms, is small bowel obstruction which may be acute or subacute[4]. Sub acute intestinal obstruction is usually benign in children and resolves spontaneously by conservative management. Same was true in the present study. Gastrografin has been advocated to relieve sub acute intestinal obstruction due to ascariasis in children[5] but it was not used in our cases because of its non-availability. For acute intestinal obstruction surgical therapy including resection of gangrenous bowel and anastomosis was performed. The postoperative course was stormy and five of nine cases died because of delayed presentation and ascaris toxaemia. Intestinal ascariasis is a serious condition in advanced cases which may lead to intestinal perforation and worm toxaemia that may be fatal[1,6]. The worm may cause to acute appendicitis in children in highly endemic areas[7]. Migration of one or two worms into the appendix lumen is not uncommon. Ascariasis is an important cause of intestinal obstruction in children of poor socio-economic status especially in developing countries resulting in significant morbidity and mortality. Clinical vigilance is essential to minimize these effects.

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