Tuberculous Appendicitis

Sir,

William J Mayo had observed in 1914 “it was curious that the appendix, which contained abundant lymphoid tissue analogous to that of the tonsils and Peyer’s patches of ileum, was seldom the primary seat of tuberculosis”1. Preoperative diagnosis of this condition is extremely difficult; and is always detected either at laparotomy, or after histopathological examination. Its correlation with associated pulmonary or gastrointestinal tuberculosis is very variable. We report a case of tuberculous appendicitis in a child successfully treated surgically.

A 2-year-old girl presented with progressively increasing abdominal distension, low-grade fever for 1 month and bilious vomiting for 2 days. There was no abdominal pain and her bowel movements were normal. There were no respiratory symptoms. There was no history of contact with tuberculosis. On examination, she was pale, mildly dehydrated and had significant cervical lymphadenopathy. Abdomen was distended and a vague mass was palpable in the right lower quadrant. There was no evidence of peritonitis. Bowel sounds were sluggish.

Abdominal radiograph showed a central radio-opaque shadow with bowel loops pushed to the periphery. There was no evidence of free intra-peritoneal air. Chest radiograph revealed mediastinal lymphadenopathy and a small pleural effusion on the right side. The lung parenchyma was normal. Abdominal sonography demonstrated dilated fluid filled bowel loops with small amount of free fluid. A clinical diagnosis of disseminated tuberculosis with subacute intestinal obstruction was made; and the child was taken up for laparotomy.

At laparotomy, minimal ascitic fluid was present. The omentum was found adherent to the right iliac fossa forming an inflammatory mass. The omental bands had resulted in closed loop obstruction of ileum at least at two sites, which were divided. The gut, though thickened, had no obvious stenosis; there were numerous tubercles on its serosal surface. Mesenteric lymph nodes close to ileocaecal junction were enlarged, a few had evidence of caseous necrosis. On further exploration, severely inflamed appendix with gross caseous necrosis was discovered; appendectomy was performed. The appendix, mesenteric lymph node and omentum were sent for biopsy. Histopathology confirmed the diagnosis of tuberculosis in all three specimens. The child recovered post-operatively and was started on 4 drug-regime of antituberculous therapy.

The pathological foci at laparotomy indicate the diagnosis of “primary tuberculous” appendicitis. However, this entity is rare and should be diagnosed cautiously, since small pulmonary lesions may be missed, and reticuloendothelial tuberculosis is not easy to detect at laparotomy. A differential diagnosis of other granulomatous conditions of the appendix like Crohn’s disease and Yersinia pseudotuberculosis should be considered in the absence of classical caseous necrosis on histopathology. Some authors have coined the term “granulomatous appendicitis” for such a condition2. More commonly tuberculosis of the appendix is associated with ileocaecal or peritoneal disease (as in this case).

On gross pathology, the appendix may either be ulcerative or hyperplastic; the former being more common. Sometimes there is “tuberculous periappendicitis” with tubercles on the serosal surface, which is usually secondary to tuberculous peritonitis or salpingitis. On microscopy, the ulcerative variety shows caseation, tuberculous granulomas and ulceration of the mucosa and submucosa. Secondary infection may cause intramural abscesses and perforation. The hyperplastic type shows lymphoid infiltration and connective tissue proliferation in the muscularis without the presence of caseation or ulceration.

It has been shown that once the appendix is involved with tuberculosis, chemotherapy alone cannot change the pathological process significantly. Unless an appendectomy is performed, there will be secondary infection leading to perforation and peritonitis. If the disease in confined to the appendix, appendectomy alone may suffice. However, if adjacent organs are also involved like ileum and caecum, further resection should be carried out followed by antituberculous therapy for at least 6 months. Primary tuberculous appendicitis is completely cured by surgery alone and has an excellent prognosis.

S. Sinha and Y.K. Sarin
Department of Pediatric Surgery, Maulana Azad Medical College, New Delhi-110002
E-mail : yksarin@hotmail.com

REFERENCES