ABDOMINAL TUBERCULOSIS – A DIAGNOSIS NOT TO MISS

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CASE HISTORY

A 61 year old Asian male presented with complaints of one month history of epigastric discomfort and microcytic anemia on recent blood test. Detailed history was suggestive that the pain was intermittent, was associated with generalized abdominal discomfort with loss of appetite for around two months. No history of hematemesis, melena or dysphagia. He had a past history of stroke in 2004 and since then had left sided hemiplegia and constipation. Use of laxative helped him to good effect.

ON EXAMINATION- Abdomen was soft, non tender, no organomegaly Examination of all other systems was unremarkable

INVESTIGATIONS- He underwent a series of investigations for his abdominal complaints which included Oesophago-gastro-duodenoscopy, colonoscopy, malignancy markers and serum electrophoresis – all were found to be negative.

CT scan abdomen and pelvis done subsequently was suggestive of significant ascites with wall thickening in jejunum so a possibility of small bowel carcinoma was raised with multiple metastatic lesions in spleen.

DIAGNOSIS- Later when this case was discussed in MDT, it was suggested that he should undergo a diagnostic laparoscopy and a gold quantiferon test for probable TB infection. Culture of peritoneal fluid was unremarkable and cytology report was suggestive of lymphocytosis

While the histology report of peritoneal biopsy and omentum ruled out evidence of malignancy, there was focal non caseating granulomatous inflammation for which the diagnosis of Abdominal Tuberculosis was made.

MANAGEMENT - He was started on anti-tuberculous drugs and later on follow up showed good recovery and improvement.
DISCUSSION

CURRENT SCENARIO OF TB IN THE UK....

Cases of TB in the UK fell from 50,000 a year in 1950 to 5745 in 1987, the lowest recorded level. Since then, the numbers in the UK have been rising again and have increased by 27% to 7300 a year. In London, the numbers have doubled; they now account for almost 40% (3000) of the national total. Each year about 350 people in Britain die from TB.

ETIOLOGY

Tuberculosis is a specific infectious disease caused by MYCOBACTERIUM TUBERCULOSIS, which is a gram positive, aerobic, non-motile, non-spore bearing bacillus. It was discovered by Robert Koch in 1882 and hence also goes by the name of Koch’s bacillus. It primarily affects the respiratory tract but can affect any part of the body.

The term abdominal tuberculosis includes tuberculous infection of gastrointestinal tract, the mesentery, its nodes, omentum, peritoneum and solid organs related to gastrointestinal tract such as the liver and spleen. Gastrointestinal tuberculosis most commonly occurs in the fourth decade [1].

TUBERCULOSIS TO ABDOMINAL TB - THE JOURNEY.

Tuberculous bacilli reach the gastrointestinal system via haematogenous spread from the primary lung focus in childhood, with later reactivation; ingestion of bacilli in sputum from an active pulmonary focus; direct spread from adjacent organs or through lymph channels from infected nodes.

In the intestinal type, bacilli in the depth of the mucosa cause inflammatory reaction and are carried to Peyer’s patches which form tubercles and undergo necrosis. Sub mucosal tubercles enlarge causing endarteritis, oedema, sloughing, ulcer formation and thus stenosis [2]. Then the inflammatory process in the sub mucosa reaches to the serosa via lymphatics; however, lymphatic obstruction of mesentry and bowel causes a thick fixed mass.
CLINICAL FEATURES

Because of its varied presentation and its ability to mimic a variety of other abdominal conditions, a high index of suspicion is required [3], mainly in individuals aged 25-44 years who are mostly affected [4].

The disease commonly presents insidiously with abdominal pain, fever, night sweats, weight loss, anorexia, nausea and vomiting, diarrhoea or constipation. It may also present as an entero-cutaneous fistula after bowel surgery, an umbilical abscess, a discharging sinus or as non-healing surgical wound.

On examination, pallor, ascites, hepatomegaly or abdominal masses due to enlarged lymph nodes, adherent bowel loops or a cold abscess may be noted [5]. The classical doughy abdomen is considered non-specific. Common complications are obstruction, perforation, fistulae and malabsorption.

As many as l/3rd of the patients with abdominal tuberculosis may present with an acute abdomen. Rolled up omentum, doughy abdomen, alternating constipation and diarrhoea are more commonly described in text books but are less frequently seen in clinical practice. The presence of associated pulmonary tuberculosis and/or peripheral tuberculous lymphadenitis is not as common as believed but should be looked for.

INVESTIGATIONS

In general the results of haematological and biochemical investigations will indicate a chronic inflammatory process. Tuberculin Test (Mantoux test) is a screening test in non endemic countries, but is of little use in endemic countries, because of high rates of positivity in healthy individuals and those who have received the Bacillus Calmette-Guerin (BCG) inoculation.
TUBERCULIN TESTING

In some cases, ascitic fluid examination and FNAC may be required. The radiological investigations include chest X-ray, plain X-ray abdomen, small bowel follow through/enema, large bowel barium enema, ultrasonography, Computed Tomography.

Endoscopy and biopsy are of great value in the diagnosis of tuberculosis of the hollow viscus. Sometimes histopathological study may show evidence of epitheloid granuloma suggesting the underlying pathology being tuberculosis.

Newer tests like Interferon-γ (interferon-gamma) release assays (IGRAs) are exciting new developments in TB infection testing. IGRAs are based on the ability of the Mycobacterium tuberculosis antigens to stimulate host production of interferon-gamma. The blood tests like Quantiferon-TB Gold in Tube and T-SPOT TB use these antigens to detect people with tuberculosis. Lymphocytes from the patient's blood are incubated with the antigens. If the patient has been exposed to tuberculosis before, T lymphocytes produce interferon γ in response and thus aid in diagnosing this condition.

MANAGEMENT

The basic approach to the management of abdominal tuberculosis is chemotherapeutic, and the general principles guiding chemotherapy are the same as for pulmonary tuberculosis (6).

In most cases, a combination of Rifampicin, Isoniazid and Pyrazinamide is used daily for the first two months, followed by Rifampicin and Isoniazid (same dosage) for the next four months.

Following the introduction of successful antituberculous chemotherapy, the mortality from abdominal tuberculosis has decreased significantly.

And, in view of this, it is important that the diagnosis be made quickly so that effective treatment can be instituted.
SURGICAL TREATMENT

Surgical intervention may become necessary in abdominal tuberculosis. Surgical procedures like strictureplasty or limited (segmental) resection etc may be performed as a part of the treatment.

REFERENCES