

Cryptic Miliary (Disseminated) Tuberculosis: A Case Report

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Abstract:

Background: Miliary tuberculosis (TB) is a potentially lethal disease if not diagnosed and treated early. However, diagnosing miliary TB poses a challenge that can perplex even the most experienced clinician. Cryptic miliary TB is miliary TB where the classical and radiological features of miliary TB are not present. Diagnosis is often delayed resulting in high mortality because of the nonspecific features. We report cryptic miliary tuberculosis in an 85 year old Nigerian.

Method: The case record of an 85 year old man admitted to the medical ward of Benue State University Teaching Hospital (BSUTH) Makurdi and literature search on the subject was used.

Result: An 85 year old man presented with diarrhea, weight loss, fever and other non specific symptoms. He did not respond to usual antibiotics necessitating a clinical diagnosis of disseminated tuberculosis that was confirmed by post mortem lymph node biopsy and histology.

Conclusion: Cryptic miliary (disseminated) tuberculosis should be considered in elderly patients presenting with non specific symptoms.

Keywords: Cryptic, Miliary, Disseminated, Tuberculosis

I. Introduction

Tuberculosis is an ancient disease that is still an important cause of morbidity and mortality. It now ranks with HIV/AIDS as the leading cause of death worldwide^{1,2}. It affects mainly the lungs (pulmonary) but can also affect other organs in the body (extrapulmonary) or become widely disseminated in several organs through haemogenous or lymphatic spread (miliary TB). Diagnosis of tuberculosis especially, the extra pulmonary and disseminated forms still poses a challenge to clinicians. In the scenario where tissue diagnosis is necessary but may be unavailable because of inaccessibility of organs, or paucity of resources and manpower commonly seen in our settings, the task becomes even more difficult. This is more so in the cryptic miliary (disseminated) form of the disease which presents with non specific symptoms leading to delay in clinical suspicion, appropriate investigations and treatment with resultant high mortality. A high index of suspicion by clinicians is needed in such cases.^{2,3,4,5}

II. Case Report

A.O, an 85 year old man was admitted to the male medical ward of BSUTH with complaints of recurrent passage of bloody mucoid stools of 6 months duration with no associated abdominal pain, swelling, tenesmus or vomiting. His condition worsened 2 months prior to presentation when the stools became more frequent and watery with associated poor appetite, profound weight loss and low grade fever. Review of systems was not significant. He had sought medical attention in several health facilities including traditional medical practitioners before presentation to our hospital.

On examination, he was chronically ill looking, moderately pale, dehydrated, afebrile with axillary temperature of 36.4⁰ C and anicteric. His pulse rate was 88/minute regular and small volume. The Blood pressure was 94/60mmHg in supine position with normal apex beat and heart sounds. The chest findings were normal. Abdominal and rectal examinations were also normal. He was conscious, alert, orientated in time, place and person with no neurological deficits.

A diagnosis of chronic diarrhea disease of unknown cause was made and he was resuscitated with intravenous normal saline and also commenced on empirical intravenous ciprofloxacin and metronidazole while awaiting laboratory results.

Initial laboratory results: Haematology showed anaemia (PCV-24%), leukocytosis (WBC12x10³ /uL) with absolute neutrophilia of 95%), platelet count was 38 x 10³ / uL(thrombocytopenia). HIV and Malarial screening, as well as blood and urine cultures were all negative.

On the 4th admission day, he developed high grade fever (temperature 39.5⁰ C) and became confused. Physical examination at this time revealed a solitary mobile non tender lymph node in the right axilla. The pulse rate was 90/minute with Blood pressure of 140/80mmHg in the supine position. Other systems were normal. Intravenous fluids and antibiotics were continued.

A diagnosis of possible Miliary (Disseminated) tuberculosis was entertained on the 9th admission day due to persistent high grade evening fever despite eight days of intravenous antibiotics and new findings of hepatosplenomegaly and mild ascites. A chest radiograph obtained showed mild bilateral pleural effusion and the abdominal scan revealed enlarged mesenteric nodes, hepatosplenomegaly, ascites and pleural effusion. His Erythrocyte sedimentation rate (ESR) was 45mm/hr; Ziehl-Neelson stain of ascitic fluid was negative for acid fast bacilli. Liver function test results showed total bilirubin of 38.6mmol/L, conjugated bilirubin 22mmol/L; AST 80iu/L; ALT 22iu/L, Alkaline phosphatase-1108iu/L, Total protein 65g/L, with hypo albuminemia (albumin 20g/L). Electrolyte and urea levels were normal, while the prostate specific antigen (PSA) was mildly elevated at 7ng/ml. A request for surgical biopsy of the solitary axillary lymph node was also made while he was empirically started on standard WHO category one (first line) antituberculosis medications comprising Rifampicin, Isoniazid, Pyrazinamide, and Ethambutol combination tablets based on his weight, on the 12th admission day. The patient's condition however continued to deteriorate and he died on 15th day of admission (4th day of tuberculosis treatment). The earlier planned lymph node biopsy which was done immediately after his death showed a fibrous capsule overlying a parenchyma within which were seen areas of central necrosis surrounded by multiple Langerhan type giant cells, epithelioid cells and lymphocytes on histology consistent with features of tuberculosis.

III. Discussion

Our patient was an elderly 85 year old man who presented initially with chronic diarrhea, weight loss and low grade fever as the main symptoms before the rapid development of high grade fever, jaundice and hepatosplenomegaly. This atypical presentation is consistent with cryptic miliary (disseminated) tuberculosis which presents insidiously before it becomes acute and typically affects the elderly. The fulminant presentation with atypical features and absence of miliary lung shadows is attributed to hampered cell mediated immunity^{4,5}. Our patient presented initially with non specific symptoms of chronic diarrhea, weight loss and low grade fever before development of high fever and rapid deterioration which is similar to what is reported in literature. The symptoms of lassitude, loss of weight, pyrexia of unknown origin, chronic ill health are erroneously attributed to some coexistent chronic disease or occult tumor in many instances. Fever may be absent as was seen in this patient on presentation^{6,7}. Miliary (disseminated) tuberculosis which was a disease of children is now seen more in patients over age 65 years and those with medical risk factors such as HIV infection, cancer and chemotherapy, alcoholism, starvation, chronic haemodialysis and viral infections (measles influenza)^{2,4,8}. Thus it is necessary for adult physicians to have a high index of suspicion for miliary tuberculosis.

The patient's chest radiograph also showed only mild pleural effusions without any miliary lesions similar to chest radiographs findings in cryptic disseminated tuberculosis reported in several other series elsewhere and is one of the defining parameters of cryptic disease^{7,8,9}.

Anaemia, leucocytosis, thrombocytopenia were present in our patient as well as highly elevated alkaline phosphatase level. Several non specific haematological and liver function abnormalities have also been reported in patients with cryptic miliary tuberculosis. These include leukemoid reaction, agranulocytosis, pancytopenia, aplastic anemia, thrombocytopenia, polycythemia, and eosinophilia^{6,10}.

Tuberculosis was not suspected by previous clinicians or on initial presentation in our facility because of the non specific nature of his symptoms and appropriate investigations which would have aided early diagnosis and commencement of therapy were not carried out or delayed. Empirical anti tuberculosis therapy was started in this patient as is recommended in suspected cases even in the absence of definite diagnosis as it may be life saving^{6,11}.

IV. Conclusion and Recommendation

Cryptic miliary (disseminated) tuberculosis should be suspected in elderly patients presenting with non specific symptoms such as pyrexia, weight loss, lassitude, negative radiographs and abnormal haematological indices as early diagnosis and commencement of treatment saves lives.

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