



Research Journal of Pharmaceutical, Biological and Chemical Sciences

Rare Co-existence of Small Bowel Lymphoma with Tuberculosis in a Young Patient.

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ABSTRACT

Non-Hodgkin's lymphoma may be preceded by chronic inflammatory disease and related to immunodeficiency. Tuberculosis on other hand is a chronic infectious disease and its presentation and reactivation is promoted by cell-mediated immunodeficiency. The coexistence of Non Hodgkin's lymphoma and Tuberculosis in same organ is rare but has been reported in immunocompromised HIV positive individuals. Here we report first instance of co-existent of a non-Hodgkin lymphoma and extra pulmonary tuberculosis in small bowel in a non-HIV positive individual.

Keywords: Small bowel lymphoma, Non Hodgkin's lymphoma, Tuberculosis, Coexistence.

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INTRODUCTION

Tuberculosis (TB) and lymphoma can share common features. We report the case of a non-HIV young male patient diagnosed with non-Hodgkin small bowel lymphoma, coexistent with extra pulmonary tuberculosis. This is a rare co-existence in a same organ, of which each condition needs different treatment [1]. The coexistence of tuberculosis and small bowel lymphoma may be co-incidental or one disease process might have initiated the other.

Case Report

A 22year old male came with history of colicky, non-radiating abdominal pain, which was progressive in nature for 1 year with loss of appetite and loss of weight. Patient had history of melena for 6 months, vomiting for 3 months and low-grade fever for 3 days.

On examination, there was a palpable mass in the umbilical and epigastric region which was firm to hard in consistency with well-defined borders. The mass was less prominent on leg rising and dull on percussion. Patient's lab parameters were normal except for mild anemia (Hemoglobin – 11 gms) and elevated erythrocyte sedimentation rate.

Ultrasound abdomen showed circumferential long segment bowel wall thickening in the periumbilical region (Figure 1).



Figure 1



Figure 2

CT scanogram (Figure 2) shows prominent small bowel loops in the central portion of the abdomen. Plain and contrast CT abdomen showed long segment bowel wall thickening involving ileal loops in the infra umbilical region for a length of 20cms with maximal wall thickness of 20mm (Figure 3). Dilatation of short segment of bowel loops proximal to the thickened bowel was seen. Irregularly marginated soft tissue density lesion with necrotic areas and foci of air noted in the mesentery in the umbilical region abutting the thickened bowel wall (Figure 4 & 5). Multiple mesenteric nodes, largest measuring ~12mm were noted adjacent to the thickened bowel. Differential diagnosis of lymphoma, carcinoid and adenocarcinoma were considered.

CECT ABDOMEN AXIAL:

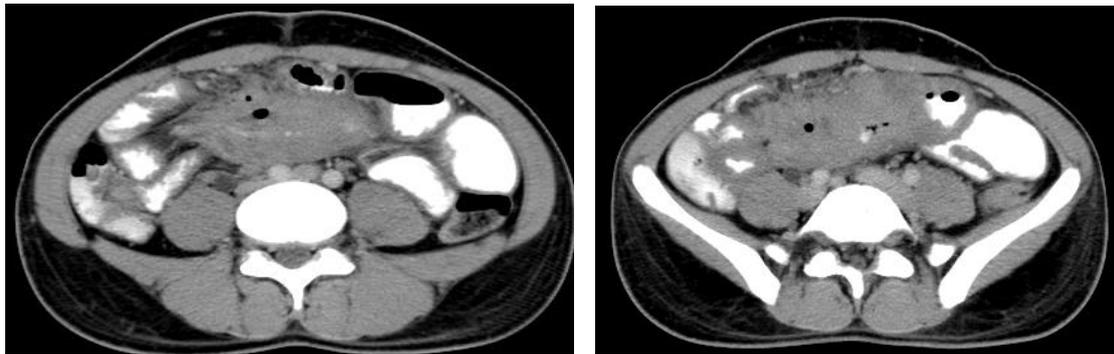


Figure 3

CECT ABDOMEN CORONAL:



Figure 4

CECT ABDOMEN SAGGITAL:

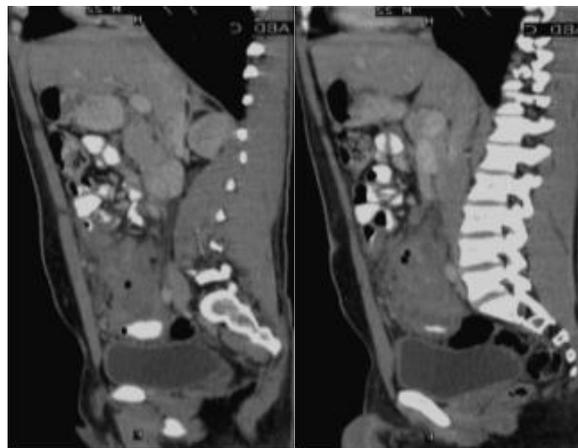


Figure 5

Patient was taken up for surgery and intra-operatively a mass (figure 6) was noted in the distal ileal mesentery compressing the ileum 15cm from the ileocaecal valve. Adjacent bowel wall thickening was noted.



Figure 6

HPE turned out to be B cell Non-Hodgkin’s lymphoma along with tuberculosis. Immunohistochemistry with CD 20 and CD 45 was positive.

Treatment for intestinal tuberculosis differs completely from that of small bowel lymphoma. Chemotherapy is the primary modality of treatment for lymphoma. Patient was started on chemotherapy with CHOP regimen [Cyclophosphamide, Doxorubicin (H-hydroxydaunorubicin /doxorubicin), Oncovin, Prednisolone]. He was also started on anti-tubercular treatment concurrently.

DISCUSSION

Intestinal tuberculosis is a specific chronic infectious disease caused by *Mycobacterium tuberculosis* and it primarily affects lungs but can affect any of the organ systems, like intestine, meninges, bones and joints, lymph nodes, skin and other tissues of the body [2]. Immunosuppression, especially depression of the T-cell defense mechanisms, is associated with mycobacterial infections. Leukemias and lymphomas are mainly associated with mycobacterial reinfections [3, 4]. The clinical manifestations of small bowel lymphoma are nonspecific, such as abdominal pain, vomiting, weight loss and intestinal perforation [5]. Small bowel is the second most frequent site of gastrointestinal tract involvement by lymphoma. Ileum is most common site of occurrence because it has the most lymphoid tissue. The coexistence of tuberculosis and small bowel lymphoma may be coincidental, or one disease process might have initiated the other.

In recent decades, the TB incidence has declined in developed countries, but the incidence remains high in countries that have high rates of HIV infection, high rates of diabetes, high prevalence of malnutrition, and crowded living conditions [6]. The Mantoux test is very often false negative in patients with Hodgkin’s disease, lymphoma and chronic leukemia or receiving corticosteroids and other immunosuppressive agents and in severely malnourished patients. Hence the diagnostic utility of tuberculin skin test is very low in the setting of underlying malignancy [7]. Mantoux test was not done in our patient, as TB was not suspected initially. TB and various types of malignancies can mimic each other and have atypical clinical and radiological expressions. Further research is required to determine whether TB infection, being similar to other chronic infections and inflammatory conditions, may facilitate carcinogenesis. Although new radiological imaging studies such as combined positron emission tomography (PET) and computed tomography (CT) have enabled clinicians to make a more accurate diagnosis, the ability of these disorders to clinically mimic one another may present a serious challenge in the establishment of the diagnosis as seen in our case[8].

CONCLUSION

Non-Hodgkin's lymphoma may be preceded by chronic inflammatory disease and related to immunodeficiency. Tuberculosis on other hand is a chronic infectious disease whose presentation and reactivation is promoted by cell-mediated immunodeficiency [9]. Tuberculosis and lymphoma can share common features. Similarities in the clinical and radiological presentations between TB and malignancy might mislead diagnosis [8]. The coexistence of Tuberculosis and lymphoma in the small bowel is rare but has been reported in immunocompromised patients like HIV positive status [10]. However co-existent tuberculosis and lymphoma has not been so far reported in non-HIV positive individuals. The diagnosis of an associated tuberculous infection remains challenging and requires a high index of suspicion, especially when it complicates the clinical presentation of cancer patients.

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