Non-Hodgkin’s Lymphoma Masquerading as Psoas Abscess: A Case Report

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ABSTRACT

We report here a rare presentation of an extra-nodal non-Hodgkin’s lymphoma. Both clinical presentation radiological findings were suggestive of psoas abscess. Surgical debridement was performed and histopathological examination of the tissue sample revealed the diagnosis of non-Hodgkin’s lymphoma. It is therefore important to note that non-Hodgkin’s lymphoma can mimic psoas abscess and that psoas lesion with vertebral involvement does not necessarily indicate infection. It is always advisable to obtain needle biopsy to establish diagnosis before embarking on surgical intervention. The practice to send any suspicious tissue obtained intra-operatively for histopathological examination is also warranted.

Key Words:
Non Hodgkin’s Lymphoma, Psoas Abscess

CASE REPORT

Mr X, a 29 y old general worker presented with 2 months history of low backache associated with left thigh pain. He also reported persistent low-grade fever associated and significant weight loss (more than 5 kg). The left thigh pain progressively worsened in the two weeks prior to presenting at the clinic and he started to experience difficulty in walking; however there was no history of lower limb numbness or weakness. The patient reported no history of chronic cough, shortness of breath or haemoptysis. He had neither tuberculosis infection nor contact with tuberculosis patients.

Clinically he looked pale and abdominal examination revealed a tender palpable mass felt over the left iliac fossa region that extended into the pelvic region. The left hip was stiff and was kept in flexed and externally rotated position. The psoas sign was positive. Spinal examination revealed tenderness over the thoracolumbar junction. Curvature of the spine was within normal limits but range of motion was limited. Neurological examination of both lower limbs was normal. There were however multiple small palpable lymph nodes in both inguinal regions and axilla. Chest examination revealed no abnormality.

Total white cell count was high at 19.8 x 10^9/l. The patient was anaemic with a haemoglobin level of 9.3 g/dl and platelets were high at 638x10^9/l. The C-reactive protein (CRP) level was 6.97mg/dl with a very high Erythrocyte Sedimentation Rate (ESR) of 120 mm/hr. The Mantoux test was negative. Blood culture and sensitivity test was also negative. The peripheral blood picture showed normocytic-normochromic anaemia. There was leucocytosis with the presence of the toxic looking neutrophils and reactive thrombocytosis indicative of an infection or and/or inflammation. The radiograph of the thoracolumbar spine (Fig. 1) revealed erosion of the anterior vertebral body of the L1 and L2 vertebra with sparing of the end plate of the both vertebra. There was no abnormal lesion seen in the respective vertebra and vertebral heights were normal. Computerised tomography (CT) scan of the thoracolumbar spine (Fig.2) revealed an inflammatory collection within the left psoas muscle and confirmed erosion of anterior portion of the L1 and L2 vertebra.

A provisional diagnosis of pyogenic spinal infection with left psoas abscess was offered. The patient was started on the empirical antibiotic therapy consisting of a combination of intravenous cloxacillin and gentamicin, however the pain and fever persisted despite antibiotic therapy. Surgical debridement and drainage of the left psoas abscess was performed 10 days after starting antibiotics. Intra-operatively, there was a 10 x 5 cm lesion in the left psoas muscle filled with unhealthy reddish looking inflammatory tissue, some necrotic tissue and purulent discharge. The tissue was sent for culture and histopathological examination.

Postoperatively, the patient was able to stand upright with near normal hip motion. The tissue culture report showed no growth detected. Histopathological examination revealed a high grade T-cell, anaplastic large cell lymphoma, with
positive immunohistochemical staining for CD 30, EMA and ALK1. He was then referred to the haematology team for 
further evaluation and management. The patient's symptoms 
and general condition improved tremendously after a few 
cycles of chemotherapy, consists of cyclophosphamide, 
adriamycin, oncovin and prednisolone (CHOP). He was 
then scheduled for bone marrow transplant with the goal of 
achieving long-term remission.

DISCUSSION

Approximately 25% of non-Hodgkin's lymphoma cases 
present extranodally; in fact, liver, spleen, gastrointestinal 
organs and kidney are common sites of involvement. Primary 
lymphoma involving the musculoskeletal system is rare. The 
primary sites for bone lymphoma are ileum, scapula, 
vertebrae, femur or tibia whereas the thigh, calf and the 
upper arm muscles are the usual sites for skeletal muscle 
lymphoma. Primary involvement of the psoas muscle as in 
the case presented herein is quite rare. Glazer et al reported 
4% of non-Hodgkin's lymphoma patients undergoing 
abdominal CT staging had secondary psoas muscle 
involved; but primary lymphoma of the psoas muscle is 
indeed very rare.

Clinical symptoms and signs of this case were indeed 
diagnostic of the psoas abscess following a spinal infection. 
Tumour was not considered as a diagnosis because spinal 
infected especially tubercular infection is quite common in 
this part of world. Moreover, primary lymphoma involving a 
psoas muscle is quite an atypical presentation.

Retrospectively, the presence of bilateral inguinal and axilla 
lymphadenopathy should have alerted us to the possibility of 
centripetal distribution of Non-Hodgkin's lymphoma. The 
fever (Pel-Ebstein fever) and weight loss were indeed 
systemic symptoms of the lymphoma. Although the blood 
count, C-reactive protein (CRP), Erythrocyte Sedimentation 
Rate (ESR) and peripheral blood picture corresponded with 
an infectious causation, the absence of positive blood culture 
should have reminded us to review the diagnosis. Radiographs and CT scan findings did not reveal classical 
destruction at the site of the suspected spinal infection 
(usually involving the end plate and/or disc space). CT 
guided needle biopsy should be performed prior to surgical 
management. Failure of empirical antibiotic treatment 
further indicated that the infection might not have been the 
correct diagnosis. During surgical intervention, the presence 
of unhealthy reddish looking inflammatory tissue with the 
absence of purulence should suggest to the surgeon that he is 
dealing with a non-infectious condition. It is always 
avisage to send tissue for culture and sensitivity as well as 
histopathological examination in all psoas abscess cases.

This case illustrates the diagnostic difficulty associated with 
a rare presentation of non-Hodgkin's lymphoma of the psoas 
muscle that closely mimics psoas abscess. A psoas lesion 
with vertebral involvement does not necessarily mean 
infected. Therefore, CT guided needle biopsy is indicated 
for this situation and surgical intervention may have been 
avoided. The practice of sending suspicious tissue obtained 
intra-operatively for histopathological examination should be 
a standard practice.
REFERENCES