Splenic Tumor Presenting as Pyrexia of Unknown Origin

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Abstract
Pyrexia of unknown origin has always been a challenging problem to diagnose for physicians. Here we present a case of a splenic tumor, which after histopathology and immunohistochemistry, two possibilities were considered, a diffuse large cell lymphoma – plasmablastic variant and second an anaplastic plasmacytoma. The patient was treated with chemotherapy and on followup he has no evidence of recurrence or any residual lesion. ©

INTRODUCTION

In a patient with Pyrexia of unknown origin, an occult malignancy should always be ruled out. A tumor of spleen was detected and splenectomy done and specimen was sent for histopathology and immunochemistry. The tumor cells showed lambda light chain restriction, with occasional tumor cells showing Leucocyte Common Antigen (LCA) and CD 20 positivity. A diagnosis of diffuse large cell lymphoma plasmablastic variant and an alternative diagnosis of anaplastic plasmacytoma was considered. The first diagnosis was considered more likely in this patient, and he was given a chemotherapeutic regimen after excluding HIV infection. Now at followup of nearly two years he has no evidence of recurrence or any residual lesion.

CASE HISTORY

A 57 years male with fever of 4 months, high grade fever with chills and rigor more during evenings, abdominal discomfort and early satiety with loss of weight since 3 months was referred to us for evaluation of the complaints. He has a history of jaundice at seven years of age and history of treatment for ureteric stone in the past. He has no history of Hypertension or diabetes mellitus in the past. He is not a smoker or alcoholic.

On examination he had pallor, cervical lymphadenopathy and was febrile. There was mild hepatomegaly and the spleen was just palpable. The other systemic examination was normal.

On investigating, he had hemoglobin of 8.8 gm% with an ESR of 170 mm/hr. He had peripheral smear which showed hypochromia, microcytes and mild anisocytosis. Bone marrow done showed only 4% plasma cells. Skeletal survey showed no lytic lesions. Echo and blood cultures done were found to be normal. He had evidence of Albumin globulin reversal with A:G of 2.9 : 3.8. Serum electrophoresis and urine Bence Jones protein were normal. Ig G levels was mildly increased to 3110 mg% and Ig M was normal. The Beta -2 microglobulin was 1.8 mg/litre and LDH was 2250. Retroviral test was negative and X-ray chest taken was normal. The patient had evidence of prolonged prothrombin time and was also detected to be HBsAg positive, Anti-HBc IgM negative. An USS abdomen done showed mild hepatomegaly and possibility of a splenic abscess. So we proceeded with a CT scan abdomen which showed a heterogeneously enhancing mass lesion arising between the greater curvature of stomach, the diaphragm and spleen. There was a large rim of calcification within the mass at its posterior aspect. The possibilities considered at that point was a malignant mesenchymal tumor and teratoma. A CT guided FNAC done showed evidence of poorly differentiated malignant cells and a trucut biopsy done showed only evidence of necrotic material with foci of calcification.

He had a chronic DIC like picture with elevated FDP values, and it was decided to remove the malignant tumour. So finally a splenectomy with sleeve resection of greater curvature of stomach was done, and a tumour with a calcified wall and infiltrating the pancreas stomach and diaphragm was removed. The splenectomy specimen in gross showed a large necrotic tumour measuring 13 x 9 x 11 cm. Multiple bits of friable necrotic tissue and adherent stomach mucosa was seen on surface A flat bony piece of tissue seen on surface and hilum showed lymph nodes, the largest measuring 2 x 1 cm. Microscopy from spleen showed a neoplasm composed of cells arranged in sheets intervened by scanty vascular stroma with lymphocytes

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and plasma cells. Cells showed eosinophilic cytoplasm and pleomorphic nuclei. Bizarre cells, bi and multinucleate giant cells, prominent mitotic activity. Areas of necrosis, calcification and hyalinization were also noted. Lymph node in splenic hilum showed reactive changes. Tumour cells were found to be negative for cytokeratin, desmin, CD 30 and CDS, and positive for vimentin. Occasional tumor cells showed LCA and CD 20 positivity. Tumour cells showed lambda light chain restriction. With the available histochemical markers the possibilities considered were diffuse large cell lymphoma plasmablastic variant and anaplastic plasmacytoma.

In the absence of a serum monoclonal protein and the absence of extensive bone marrow involvement along with increased mitotic activity of the tumour is more suggestive of a plasmablastic lymphoma, rather than...
an anaplastic plasmacytoma. Hence he was started on a chemotherapy regimen comprising of cyclophosphamide, doxorubicin, vincristine and prednisolone. During the sixth cycle, he developed febrile neutropenia and we were forced to reduce the dose. He developed jaundice following chemotherapy which resolved with conservative management. He is now on regular followup, and after nearly two years of completing the chemotherapy regimen, he is symptom free, and an ultrasound abdomen taken now has not shown any clinical, biochemical or radiological evidence of recurrence.

**DISCUSSION**

Diffuse Large B cell Lymphoma (DLBCL) plasmablastic variant usually occurs in the setting of HIV infection, but there have been cases of this variant occurring in immunocompetent patients. In all these cases the predilection for extranodal sites has remained constant and most of the cases has demonstrated a predilection for oral cavity mucosa. The term "plasmablastic" was coined by Stein and Dallenbach in 1992, for this variant of DLBCL, which has the morphological features of immunoblastic lymphoma with plasmacytic differentiation and phenotypical properties of plasmacytoma (CD45 negative, B-cell antigens negative and immunoglobulin positive with light chain restriction). The real incidence of this variant is unknown but they make up around 4% of the DLBCL according to a report. The number of cases of DLBCL plasmablastic variant presenting with PUO and splenic tumour in HIV negative individuals is unknown. However two cases of plasmablastic lymphoma presenting as gastric tumour in HIV negative individuals have been reported.

Morphologically, cells are described as large and centroblastic or immunoblastic, but this variant has absent or faint expression of the common lymphoid antigens. But it is seen that they expressed plasma cell related antigens such as CD138, VS 38C, P63 and variable CD79A with heavy or light chain restriction, which is consistent with a marked plasmacytic differentiation of the tumour. But the plasmablastic variant of DLBCL is difficult to differentiate, from a plasmacytoma, which has acquired anaplastic morphology with a predominance of blastoid appearing cells. They are differentiated from the fact that the plasmablastic DLBCL are entirely composed of blastoid appearing cells and do not contain the mature and proplasma cells consistently present in plasmacytoma.

Besides plasmablastic lymphoma show a high association of 60% with EBV infection whereas the EBV genome has been found only in 6.7% of plasmacytomas. The AIDS related plasmablastic DLBCL are very aggressive and the prognosis poor with survival of 1 to six months despite chemotherapy with or without combined radiotherapy. The data regarding prognosis in immunocompetent individuals presenting with this variant is unknown, although a median survival of 12 months has been reported.

Our case report is significant in many aspects; a DLBCL plasmablastic variant presenting as pyrexia of unknown origin and splenic tumour is rare and it is unusual in immunocompetent individuals. But the most heartening fact is that, even after nearly two years of followup, after splenectomy and chemotherapy, he still has no evidence of recurrence as evidenced, clinically, and radiologically. This case is being presented to look for occult malignancy in all individuals presenting with PUO, so that timely intervention can prolong the survival of the individual.

**REFERENCES**


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