Left thigh swelling in an AIDS patient

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Citation

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Abstract

Burkitt's lymphoma is Burkitt's an aggressive non-Hodgkin's lymphomas (NHL). It occurs most often in immunocompromised patients. It typically affects those patients with a high CD4 count and patients often have a high serum lactate dehydrogenase (LDH) levels. The patient is a 33 year old male who presented with progressive left thigh swelling. He has been treated with highly active antiretroviral therapy (HAART) therapy for several years .Patient's cat scan (CT)showed evidence of a soft tissue mass which was confirmed by an incisional biopsy. The patient once diagnosed underwent intensive chemotherapy including hyper-CVAD chemotherapy regimen. His thigh swelling responded well to this treatment. Patient's hospital course was complicated by tumor lysis syndrome which required four days of dialysis treatment. Pathogenesis, diagnosis and therapy of AIDS associated Burkitt's
lymphoma are reviewed for this unusual presentation of Burkitt's lymphoma.

INTRODUCTION

We report a case of a 33 year old man with acquired immunodeficiency syndrome(AIDS) who has been treated with highly active antiretroviral therapy (HAART) therapy for several years. He presented with progressive left thigh mass. He had already been diagnosed and treated with chemotherapy for diagnosed Non-Hodgkin's lymphoma (NHL). We will also review the case in view of current literature and latest treatment modalities.

CASE REPORT

The patient presented to the hospital complaining of left leg and thigh swelling as well as left leg pain. He has had this for several weeks which got worse over the last week.

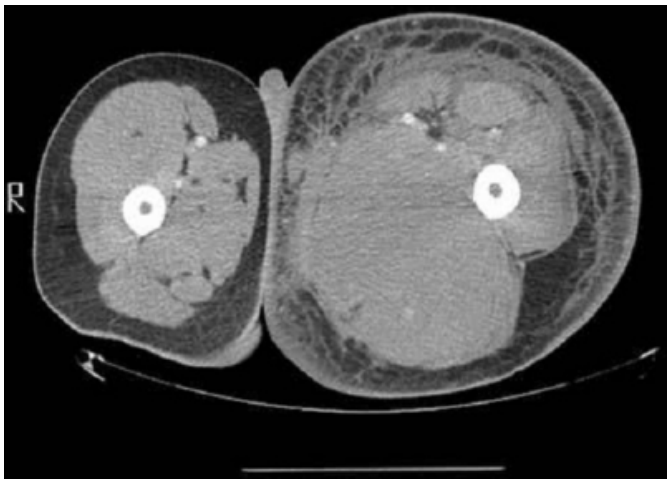
On admission his vital signs were normal and he was afebrile at 98.3 F (36.8 C).

Relevant findings on physical exam were presence of marked edema and tenderness in left thigh region. Relevant laboratory findings were lactate dehydrogenase (LDH) of 902.0 U/L. and white blood cell count (wbc) of 5.8 K/cmm. Sedimentation rate was normal at 11 mm/hr. His Cd 4 count was also normal at 517 cells/uL and his HIV viral load was also undetectable. He had a normal creatinine phosphokinase(CPK) of 91.0 U/L. Venous ultrasound of his left leg revealed findings of occlusive deep venous thrombosis involving the left popliteal vein. CT scans of the abdomen and pelvis revealed evidence of hepatosplenomegaly, left pelvic and inguinal lymphadenopathy. Positron emission tomography (PET) scan revealed extremely intense fluoro-2-deoxyglucose (FDG) activity within a mass in the posteromedial muscles of the left thigh extending from the ischial tuberosity to the mid thigh.

CT scan of the thigh area (Figure 1) revealed presence of soft tissue swelling with enlargement of muscles in the thigh and gluteal region on the left.

Figure 1

Figure 1: CT scan of the thigh showing swelling of the thigh on the left side.



He underwent incisional biopsy of left thigh area which was

consistent with Burkitt's lymphoma.

His bone marrow biopsy and aspirate were unremarkable and he had started aggressive chemotherapy regimen with hyper-CVAD chemotherapy regimen consisting of hyperfractionated cyclophosphamide, vincristine, doxorubicin, dexamethasone, methotrexate, cytarabine, and rituximab. 3 days after the chemotherapy was started the patient developed tumor lysis

syndrome. This presented as uric acid elevation to 13.7 mg/dL, maximum potassium elevation to 5.2 mEq/dL and phosphate elevation to a nadir of 16.3 mg/dL. His creatinine also rose from 0.96 mg/dL to a maximum value of 4.39 mg/dL though he remained non-oliguric. Hemodialysis was initiated through an internal jugular vein dual lumen temporary catheter using polysulfone membrane

(Optiflux 160; Bad Homburg, Germany) with a blood flow of 350 mL/min and a dialysate flow of 800 mL/min. The patient was dialyzed four days, daily. On the fifth day he became polyuric and his electrolytes improved while holding dialysis sessions. After four days of holding dialysis and observing a spontaneous improvement in the renal function dialytic therapy was stopped. Patient subsequently felt better and was discharged home in improved condition and his thigh swelling responded to chemotherapy.

DISCUSSION

It has been predicted that 8% to 27% of newly diagnosed cases of NHL are related to AIDS [1].The majority are clinically aggressive B cell-derived lymphomas.

There have been several case reports in the literature regarding Burkitt's lymphoma involving many different sites. Gastrointestinal tract involvement has also been reported [3,4] .Park et al. [5] described a case of hepatic lymphoma with associated periportal lymphoma involvement. Gabbato at al. [6] also described a rare case of primary meningeal high grade Burkitt-type lymphoma. Involvement of thigh region is very rare based on the review of the current literature.

AIDS-associated lymphoma patients carry a poor prognosis. A high serum lactate dehydrogenase (LDH) level is associated with a worse prognosis[3]. Abdominal mass, bone marrow and central nervous system(CNS) involvement also carry negative prognosis [3].

Mortality and morbidity in HIV-associated Burkitt's lymphoma have improved because of more effective chemotherapy regimens and HAART therapy [1].

Burkitt's lymphoma does not respond well to standard chemotherapy regimens. The application of intensive chemotherapy protocols using alkylating agents and intensive CNS prophylaxis has provided better outcomes.

Cortes et al. [2] demonstrated that hyper-CVAD is a potent chemotherapeutic regimen for patients with Burkitt's lymphoma in AIDS patients. Hyper-CVAD and HAART regimens are associated with improved long-term survival in patients [2].

Clinical studies have showed that intensive chemotherapy regimens combined with aggressive central nervous system therapy results in higher long-term survival rates in young adults between 70% to 80%,whereas long-term survival rates in older adults remains at 15% to 25% [1].

A steady increase in the prevalence of neoplastic diseases has been noted following the introduction of HAART. There has also been a decline of opportunistic infections in AIDS patients as a result of HAART therapy . Better prevention and treatment of AIDS related infections led to the higher incidence of AIDS-related malignancies. Despite the fact that this patient had concurrent DVT, clinical awareness helped us diagnose the patient's underlying malignant mass.

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