CORRESPONDENCE

“Everything that Glows on PET is not Lymphoma”: An Unheralded Intruder in a Case of Diffuse Large B Cell Lymphoma

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Dear editor,

Patients of diffuse large B cell lymphoma (DLBCL) with low (0–1) international prognostic score (IPI) has an expected 5 years survival of 73% [1]. RCHOP remains the standard first line chemotherapy. Infections during and after chemotherapy is often encountered and more so in developing countries. However, isolated muscle cysticercosis is an unusual infection and moreover, FDG avid mass like presentation of cysticercosis is extremely rare. The index case was a prototype of low risk (IPI-0) DLBCL who responded and became asymptomatic with chemotherapy. However, an unexpected and unusual presentation of cysticercosis kept everybody guessing.

A 36-year-old gentleman presented with the complaints of low grade fever, weight loss and left cervical lymphadenopathy for 1-month duration. Left cervical lymph node excision biopsy was suggestive of diffuse large B cell lymphoma confirmed by immunohistochemistry. On further evaluation, he was found to have Ann Arbor stage IB disease on the basis of contrast enhanced CT (neck, chest, abdomen and pelvis) and bone marrow biopsy. As per our institutional protocol for early stage DLBCL, he was administered 4 cycles of R-CHOP chemotherapy followed by involved field radiotherapy. He came to follow up with end of treatment whole body PET-CT scan. He was

asymptomatic, clinical examination was unremarkable. He had gained 4 kg weight in last 6 weeks and was subjectively feeling better. His hemoglobin was 120 g/L, WBC $6.9 \times 10^9/L$, and platelets $270 \times 10^9/L$ with normal peripheral blood smear. However, the PET-CT revealed an isolated intensely FDG avid (SUV max 10.5) soft tissue mass with perilesional stranding in the right iliacus muscle having ill-defined fat planes with right psoas muscle (Fig. 1a, b) and also a central photopenia suggestive of necrosis. A PET-CT guided core biopsy was taken from the lesion and sent for histopathology. Multiple cores examined were composed of fibrous tissue with mixed inflammation comprising of lymphocytes, plasma cells and eosinophils (Fig. 2a). A separately lying fragment of parasite consistent with cysticercosis was also seen which was PAS positive (Fig. 2b). No evidence of any lymphomatous infiltrate was present. On further screening, cysticercosis was not seen anywhere else in the body (normal MRI brain). He was given a course of oral albendazole (400 mg OD $\times$ 21 days). Two months later, the patient continues to be asymptomatic and repeat limited PET-CT showed complete disappearance of the lesion (Fig. 1c, d).

Cysticercosis is not an uncommon endemic disease in the developing countries including India. It is caused by ingestion of eggs of pork tapeworm *Taenia solium*. The eggs are excreted in feces of infected human being (condition called teniasis) and contaminate the food materials, which on ingestion penetrates the intestine and reach organs like brain, eye, skeletal muscles or subcutaneous tissues [2]. The commonest organ involved is brain followed by eye, muscle or subcutaneous tissue but mostly a combination of two or more. However, it is rare to find an isolated muscle cysticercosis. As it can't grow further, it remains dormant and undiagnosed forever and doesn't

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Fig. 1 PET-CT showing FDG avid lesion involving right iliacus muscle (**a**, **b**) and resolution of the same can be noted in subsequent PET-CT (**c**, **d**)

Fig. 2 **a** Histopathological examination of core biopsy showing fibrous tissue with mixed inflammation comprising of lymphocytes, plasma cells and eosinophils. **b** A fragment of tegment of parasite consistent with cysticercosis which was PAS positive

require any treatment. However, if it partially or completely ruptures (mostly due to some trauma), it mounts inflammatory response and leads to diagnosis and requires therapy [3]. The cysticercosis mass can be incidentally detected and get confused with tumour as these masses may be FDG avid [4].

The index case is a rare case of isolated iliacus muscle cysticercosis. In our case, it was a source of great stress for the patient and dilemma for the treating team. However, a guided biopsy clearly made the diagnosis and it was successfully treated with albendazole. The index case also highlights the dictum that every case of lymphoma with new lesions on interim and/or end of treatment PET scan must undergo directed biopsy before the initiation of the salvage chemotherapy.

Compliance with Ethical Standards

Conflict of interest There is no conflict of interest between the authors.

Informed Consent Informed signed written consent was taken from the patient involved.

Ethical Approval All procedures performed in studies involving human participants were in accordance with the ethical standards of the institutional and/or national research committee and with the 1964 Helsinki declaration and its later amendments or comparable ethical standards.

Human and Animals Rights No animals were involved in the study.

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