Paraplegia: An Unusual Presentation of Follicular Lymphoma

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Abstract Paraplegia is a rare complication of Non-Hodgkin Lymphoma and is mostly associated with high grade B cell lymphomas. We are presenting a rare case of follicular lymphoma, presenting with isolated paraspinal mass leading to paraplegia without any lymphadenopathy or hepatosplenomegaly.

Keywords Paraplegia · Follicular lymphoma · Neurological

Introduction

Follicular lymphoma (FL) is the commonest indolent Non-Hodgkin's lymphoma [1]. It usually presents with advanced stage disease and bone marrow involvement is seen in around 40 % of patients [2]. Although the disease is widespread at presentation, CNS involvement is very rare. We describe a rare case of follicular lymphoma with paraplegia.

Case

A 66 year old male, a known diabetic on insulin therapy presented to us with dull lower back pain for 15 days. He also had history of progressive anemia and significant weight loss for last 6 months. The patient had been transfused four units of packed red cells in the past 2 months. There was no history of bleeding manifestations and jaundice. On admission, he was afebrile with mild pallor

but there was no lymphadenopathy or hepatosplenomegaly. In the next 2 days, his back pain progressed further and he suddenly developed complete paraplegia with bladder involvement. Neurological examination revealed complete paraplegia with a sensory level at L1 level. Hemogram showed Hemoglobin of 10.2 gm/dl, total leucocyte count of $5,500/\text{mm}^3$ with a differential showing N70, L15, M12 and a platelet count of $601,000/\text{mm}^3$. Liver and renal functions were within normal limits. Direct Coomb's test was negative. MRI spine showed an extradural mass extending C6–T4 with compression at T2–T3 (Fig. 1a).

A CT scan of the neck, chest and abdomen did not reveal any lymphadenopathy or organomegaly but reported a paraspinal mass from C7–T4. He underwent urgent decompression surgery with resection of the extradural mass and laminectomy. The biopsy specimen showed a vague follicular pattern and the follicles were composed of small cleaved centrocytic cells. Centroblasts formed a minor component comprising $<5/\text{hpf}$ (Fig. 1b). The neoplastic follicles were positive for CD20, CD10, bcl-2 (Fig. 1c) and negative for CD2, CD3, CD5 and cyclinD1 by immunohistochemistry. Hence, the tissue biopsy of the mass was reported as grade 1 follicular lymphoma. The bone marrow aspiration showed ~30 % atypical lymphoid cells and the bone marrow biopsy showed diffuse involvement of a few intertrabecular spaces by atypical lymphoid cells while normal marrow components were also preserved in other spaces. There were several areas of bone marrow necrosis and bone marrow fibrosis in the biopsy. The diagnosis was consistent with stage IVB extranodal FL grade 1 with cord compression. The FLIPI score was 2 and hence the patient was in intermediate risk category. The patient was managed with chemotherapy (CVP) with palliative radiotherapy (single fraction 8 Gy).

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Fig. 1 **a** MRI spine showing an extradural mass, **b** high power view showing a predominantly centrocytic population ($\times 400$) **c** immunohistochemistry for CD20, CD10 and Bcl-2

After four cycles of chemotherapy, the patient is currently stable; however there was no neurological improvement.

Discussion

Paraplegia because of cord compression as a presenting complaint has not been reported with FL. In our case, paraplegia due to cord compression was the presenting feature of FL without any lymphadenopathy or hepatosplenomegaly. CNS involvement occurs in $\sim 3\%$ indolent lymphomas [3]. In a series of 140 lymphomas with CNS involvement, B symptoms, bone marrow involvement and skin involvement were predictors of CNS disease [4] but this is not true for FL as bone marrow involvement is seen in $\sim 70\%$ cases at diagnosis [3]. Only a few cases of follicular lymphoma with CNS involvement have been reported and in most of these, the CNS disease occurred few months to years following the diagnosis of the FL [3, 5]. Spectre et al. [3] reported CNS involvement four cases of FL out of which two patients developed hemiparesis but all cases developed CNS involvement later in the course of disease. In a second series comprising 25 cases, working formulation classification was used and there were three cases of follicular architecture. However, the Bcl-2 and CD10 status of these cases is not known [5]. Only one case of primary FL of the dura was reported but this case was also Bcl2 negative [6]. The unique feature of our case is the unusual presentation of follicular lymphoma as the patient

presented with paraplegia secondary to isolated extranodal involvement.

Conclusion

Low grade lymphomas may present with paraplegia.

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