

Lymphoplasmacyte-rich Meningioma Mimicking Tubercular Meningitis: A Case Report

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Citation

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Abstract

Lymphoplasmacyte-rich meningioma is a designation adopted by the new World Health Organization Classification of Tumors of the Central Nervous System [1] to describe a tumor characterized by the components or features of a common meningioma accompanied by massive infiltration of plasma cells and lymphocytes. It has usually atypical histological and clinical presentation, as in our case mimicking as meningitis is very unusual. We report a case of 55 year old diabetic with lymphoplasmacyte-rich meningioma.

CASE DETAILS

A 55 year old known case of diabetes presented with history of falls in May 2007. On examination quadriparesis was noted. Nerve conduction studies ruled out neuropathy. Lumbar puncture was done and CSF showed lymphocyte predominance and high protein levels and a provisional diagnosis of tuberculosis was made and patient was started on ATT and steroids. However, no improvement was noted on serial clinical and CSF examinations. MRI of brain and whole spine with gadolinium was done. MRI brain revealed multiple lobular extra-axial intensely enhancing lesions in the planum sphenoidal region, retroclival region (figures 1 and 2), both basifrontal region and bilateral convexities. Meningeal thickening and tentorial enhancement was noted. Additional imaging of spine revealed intradural extramedullary lesion extending from C5-D2 levels (figures 3 and 4) causing cord compression and displacement and a radiological diagnosis of en-plaque meningioma was made.

Figure 1

Figure 1

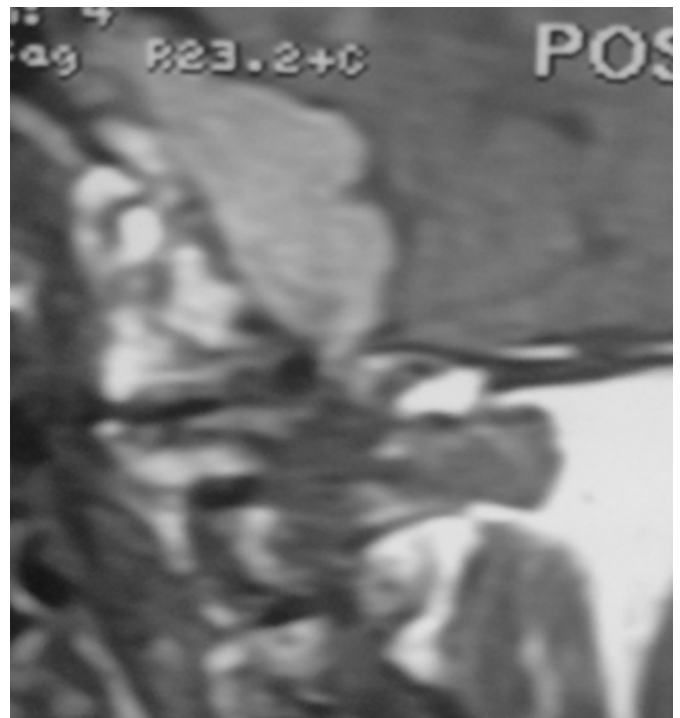


Figure 2

Figure 2

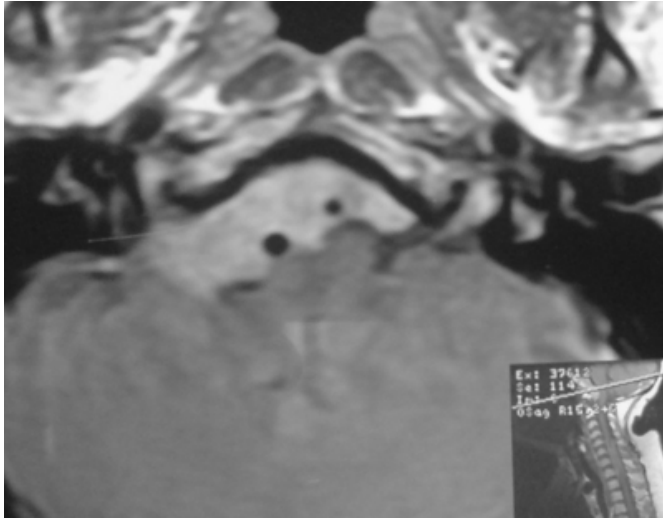


Figure 4

Figure 4



Figure 3

Figure 3

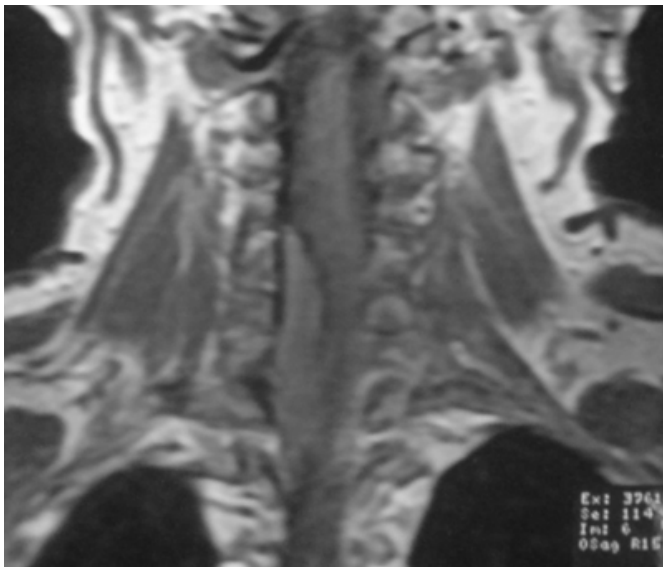
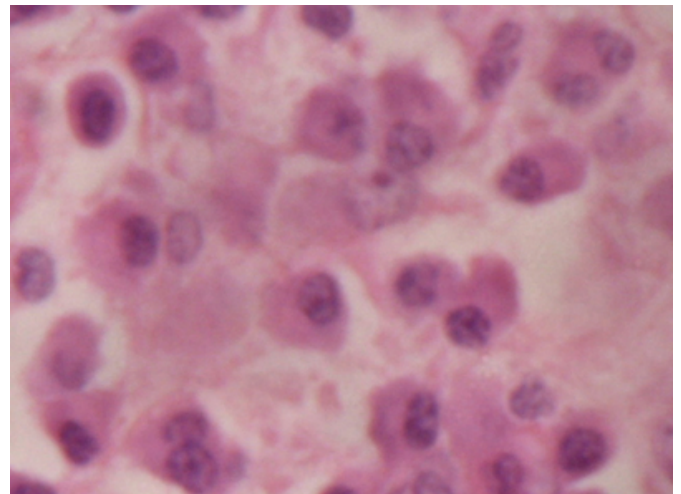


Figure 5

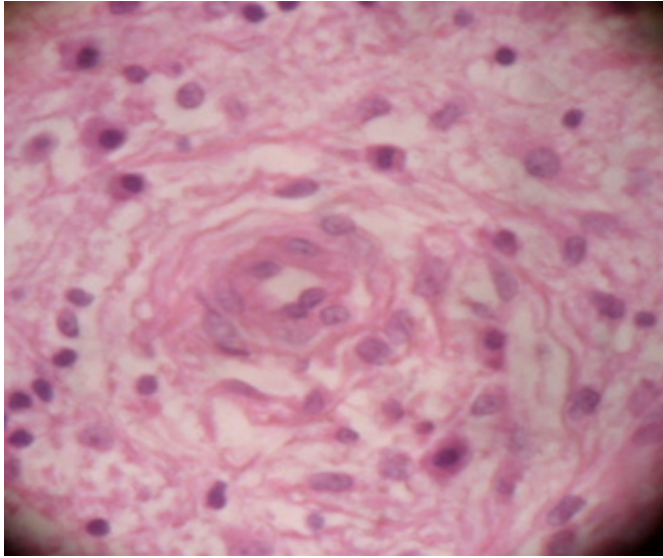
Figure 5



Patient was operated and intradural Extramedullary cervical tumour was excised and histo-pathological study revealed that the lesion was composed of polygonal cells having central spheroidal nuclei and pale eosinophilic cytoplasm. In many foci, the cells were arranged in whorls. There was a rather heavy infiltration by lymphocytes and plasma cells. (figures 5 and 6) Blood vessels had thick walls. There were no psammoma bodies. No mitosis or atypia was seen.

Figure 6

Figure 6



A diagnosis of inflammatory meningioma (lymphoplasmacyte rich meningioma) was made. Patient improved and was discharged.

DISCUSSION

Various hypotheses have been advanced to explain the infiltration of lymphoplasmacytes. For example, these lesions have been proposed to develop from the collision of a plasmacytoma with a meningioma or from a plasmacytoma of the meninges with a leptomenigeal reaction.^[2] The inflammatory cell reaction to the meningioma has also been proposed to constitute a mechanism of host resistance.^[3] However, the relationship between inflammatory lesions and meningiomas remains uncertain.

In accordance with the WHO's Histological Typing of Tumours of the Central Nervous System, this rare clinical entity is recently designed as lymphoplasmacyte rich (LPR)

meningioma. This type of meningioma is usually accompanied by prominent peripheral blood abnormalities, anemia and/or polyclonal gammopathy that disappear after surgical removal of the tumor. Actually, the origin (neoplastic or inflammatory) of this tumor is unclear; its biological behavior and clinical course are anomalous so it is considered closer to intracranial inflammatory masses rather than typical meningioma. ^[4]

The prognosis for patients with lymphoplasmacyte- rich meningioma is unknown. Our patient remained clinically well during one year of follow-up. Further study of lymphoplasmacyte rich meningiomas is required to determine the prognosis of patients with lymphoplasmacyte-rich meningioma and to clarify the significance of the meningeal reaction as a manifestation of the host– tumor relationship at the meninges. Our case had a peculiarity that initial clinical and laboratory diagnosis of tubercular meningitis was made and MRI helped in the final diagnosis. Meningiomas presenting as tumors with the features of a lymphoplasmacyte-rich meningioma are very unusual ^[2,3,5] Treatment differences between tumor and meningitis necessitate the awareness of this condition.

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