



“Trishul” Sign due to Posterior Corpus Callosum lesion on Contrast MRI Brain: A Case of B Cell Lymphoma

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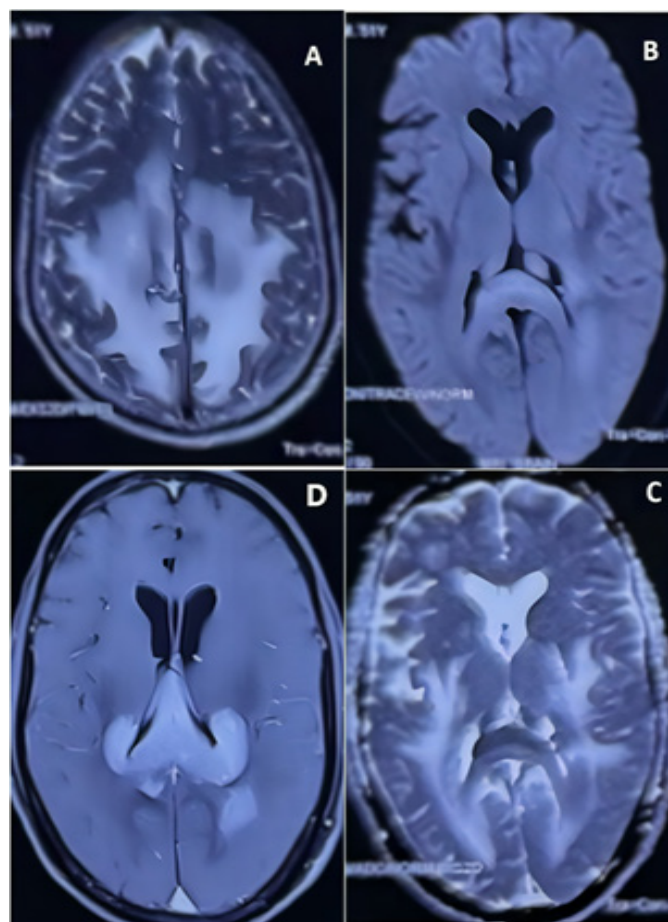
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This 51 years male presented with one-month history of progressive quadriparesis and cognitive decline during last one month underwent contrast enhanced magnetic resonance imaging (MRI) of brain. MRI brain grossly showed bilateral symmetrical white matter hyperintensities on T2W (Image 1A) and FLAIR images which were mainly localized at posterior parietal and occipital area and posterior corpus callosum. Also, there were bilateral almost symmetrical rounded modular mass lesion in posterior para-callosal region which were heterogeneous in intensity and this mass also had infiltration in splenium. Para-callosal and splenium lesion had diffusion restriction on DWI with ADC reversal (Image 1B & C). On post-contrast images, there was diffuse enhancement of posterior corpus callosum, splenium and para-callosal lesion which had shape like “Trishul” (Image 1D).

Figure 1: MRI Brain Axial Images showing T2W Hyperintensity in posterior parieto-occipital are (A), Diffusion restriction and low ADC value (B&C) with “Trishul Sign” on post contrast images (D).



There are multiple causes of corpus callosum involvement by acquired neurological conditions. Mnemonic for the of etiology of corpus callosum hyperintense lesions on MRI is I-MADE-A-PHD (Infective, Marchiafava-Bignami Syndrome, AIDS encephalopathy, diffuse axonal injury, epilepsy, Autoimmune

Encephalitis, Posterior reversible encephalopathy syndrome, hypoglycemia and demyelinating disorders) [1].

Specific splenium involvement is further rare and along with above mentioned causes, few infiltrative disorders, can involve splenium of corpus callosum [2]. Infiltrative lesions of splenium are most commonly reported due to either glioblastoma or lymphoma [2].

It is sometime difficult to differentiate between two on radiological basis. The main radiological difference between two diagnoses can be done on the basis of;

a) Presence of absence of diffusion restriction and

b) Type of contrast enhancement [2].

In case of lymphoma diffusion restriction is positive on DWI/ADC images and contrast enhancement will be diffuse and intense as in our case, while in glioblastoma there will be no diffusion restriction and enhancement will be heterogeneous [2].

This patient extensive evaluation and excision biopsy from

abdominal nodule showed poorly differentiated, large B cell type non-Hodgkin lymphoma. Tumor cells were positive for CD20, BCL2, BCL6, MIM1 and C-myc. Ki67 proliferation index was 80%.

Thus, in any patient having “Trishul” sign on MRI with posterior corpus callosum involvement with T2 hyperintense, diffusion restriction and dense contrast enhancement, one should consider the possibility of B cell Lymphoma.

Declaration: We have taken the informed consent for using the information for publication

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