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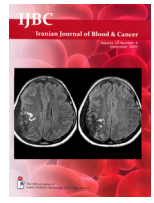

Letter to Editor

A Rare Presentation of a Subdural Hematoma

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Dear Editor

Primary central nervous system lymphoma (PCNSL) is an extranodal non-Hodgkin lymphoma involving brain, intraocular structures and spinal cord, without evidence of systemic disease. Most PCNSLs are diffuse large B-cell type which often present as a space occupying lesion within the brain parenchyma and periventricular regions.[1] Primary dural CNS lymphomas are extremely rare. Most of them are low grade NHL, with marginal zone lymphoma (MZL) of B-cell as the most common subtype.[2, 3]

A 67-year-old lady presented with a sudden-onset weakness of left upper limb and facial deviation to the right side. She had a history of trauma to the head five days prior to this event. Magnetic resonance imaging (MRI) of the brain was performed and showed isointense right fronto-parietal convexity extra axial lesion causing mass effect and midline shift of 7.5 mm to the left side suspicious of sub dural hemorrhage (SDH). A burr hole was placed for evacuation of the hematoma. Postoperative contrast enhanced MRI showed irregular patchy heterogeneous enhancement of the dural layers with focal nodular areas (figure 1). She underwent right fronto-temporo-parietal craniotomy with subtotal excision of the dural based convex lesion. The specimen consisted of two dark brown membranous soft tissue measuring 6x3.5x0.6 cm and 3x3x0.6 cm, respectively. Microscopically, there were atypical predominantly small to medium sized lymphoid cells with clear cytoplasm and irregular nuclear membranes along with follicular colonization. Immunohistochemistry (IHC) was positive for CD10 and surface IgD and negative for CD5, bcl6, cyclin D1, CD43 and surface IgM with a MIB-1 labeling index around 15-20% (figure 2). These findings were consistent with marginal zone lymphoma.

Bone marrow morphology, cerebrospinal fluid analysis and computed tomography of head, neck, thorax, abdomen and pelvis were unremarkable. The patient was planned for cranial radiation and received whole brain radiation to a total dose of 25.20 Gy while received boosts to a total dose of 30.8 Gy to the primary site. She is doing well after 6 months of follow up.

Lymphoma that arises from the dura are usually low-grade B-cell marginal zone lymphoma. The pathogenesis of the Dural MALT lymphoma is not totally understood, as the dura is free of any lymphoid tissue. Some consider it as the consequence of seeding from an undiagnosed systemic MALT lymphoma.[4] Another postulate is that meningothelial cells at the arachnoid membrane and dural venous sinuses are embryologically similar to epithelial cells at other sites in which MALT lymphomas arise.[5]

Dural MALT lymphoma usually occurs in the middle-aged to elderly women and presents with headache, seizures, and visual disturbance. It has a favorable prognosis compared to other CNS lymphoma subtypes or dural metastasis of systemic lymphoma. They appear as a localized solid extra-axial lesion, either dural-based or leptomeningeal, frequently showing a “dural tail” sign on gadolinium-enhanced MRI images. The lymphocytes express B-cell markers CD19, CD20, and CD79a and

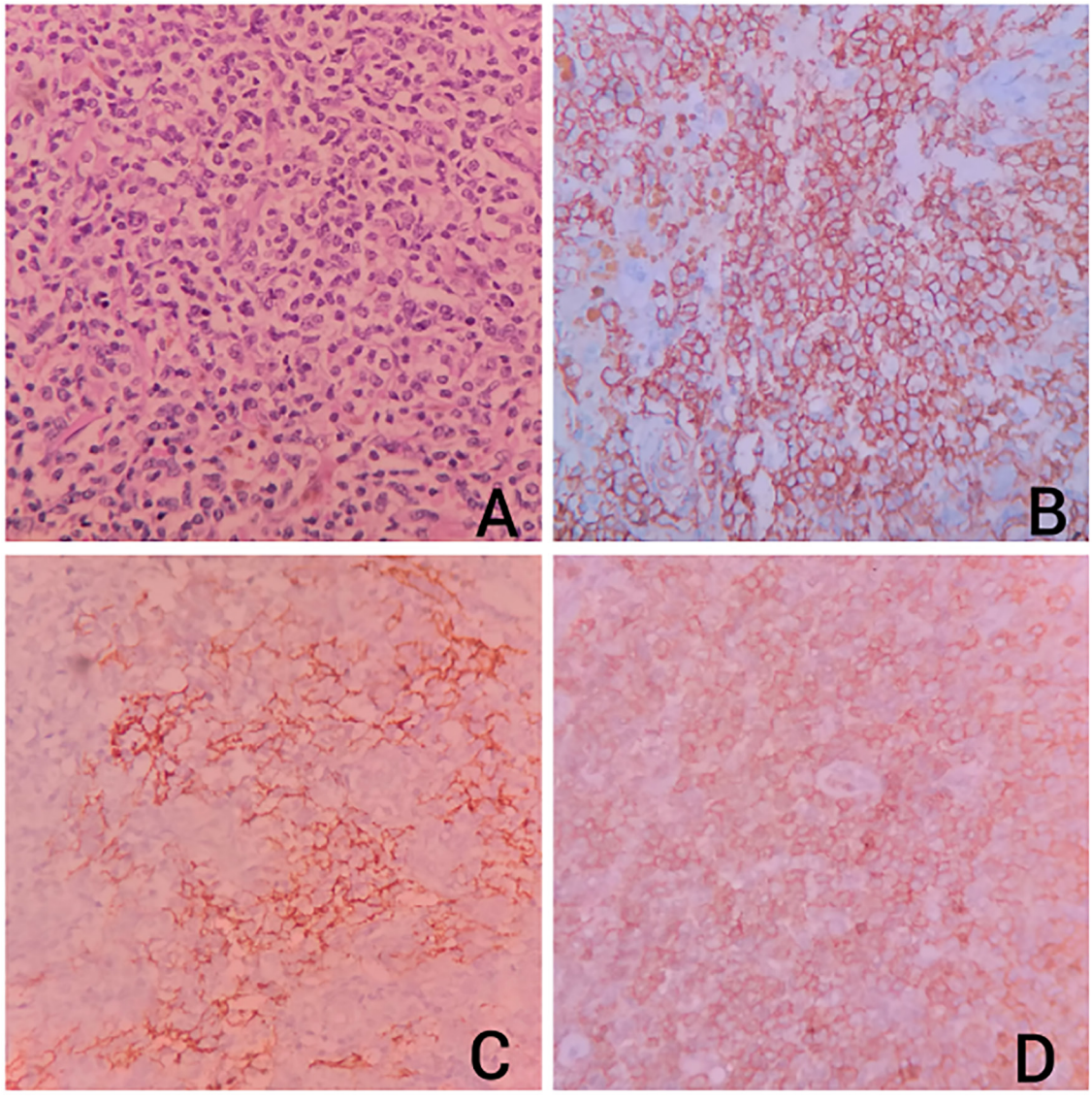

Figure 1: Microphotography finding of the surgical specimen, showing infiltration of neoplastic lymphoid cell, monomorphic population of small to moderate B lymphocyte, H&E staining (A).Positive staining for CD20 (B), CD23 highlighting disrupted follicular network (C) and positive staining for sIgD (D).

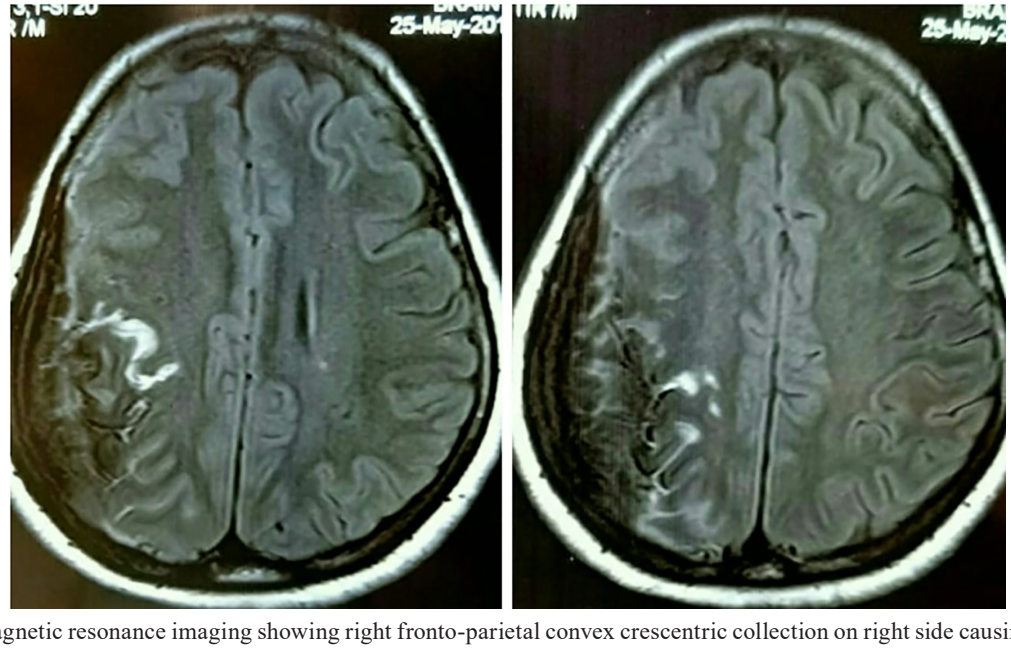

Figure 2: Magnetic resonance imaging showing right fronto-parietal convex crescentric collection on right side causing mass effect on underlying brain parenchyma

are negative for CD3, CD5, CD10, CD23, and cyclin D1.[6] Differential diagnosis of MALT lymphoma of the dura include; meingioma, lymphoproliferative lesions, infections, inflammatory or granulomatous diseases and metastases. Due to the rarity of the disease, there is no standardized treatment plan; however, disease limited to a single site has a good response to local treatment such as surgery or focal radiation.[7]

An interesting feature of the lymphoma in this case was the unusual presentation after coincidental trauma. This case demonstrates the importance of maintaining a wide differential diagnosis for dural based lesions.

Conflict of Interest: None declared.

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