

Clinical Image

Pachymeningeal Inflammation Mimicking Lymphoma Recurrence

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66-year-old man with primary CNS lymphoma, in remission for four years, had a surveillance brain MRI demonstrating focal pachymeningeal enhancement (Figure 1). Examination was normal, aside from right forehead erythema after cryosurgery to a nevus. The question we faced was whether to re-initiate cytotoxic chemotherapy for presumed lymphoma recurrence, or to perform short interval follow up in case of an alternate diagnosis. Choosing the latter, repeat MRI one month later showed resolution of the abnormality (Figure 2). Two years of additional imaging confirmed no lymphoma recurrence. Cryoinjury was the suspected cause of his transient MRI changes, based on temporospatial correlation. Liquid nitrogen reaches temperatures of -100°C and [1], if delivered to the skull, may cause intracranial cryoinjury and temporary, regional inflammation [2]. Cryosurgery may be associated with focal MRI abnormalities. Further, the case illustrates the importance of clinical correlation in the interpretation of cranial imaging to avoid unnecessary tests and potentially harmful treatment.



Figure 1: (A) Axial, (B) Axial Regional Enlargement, and (C) Coronal T1-weighted post-gadolinium images demonstrating right frontal convexity pachymeningeal thickening and enhancement, with no underlying parenchymal abnormality.

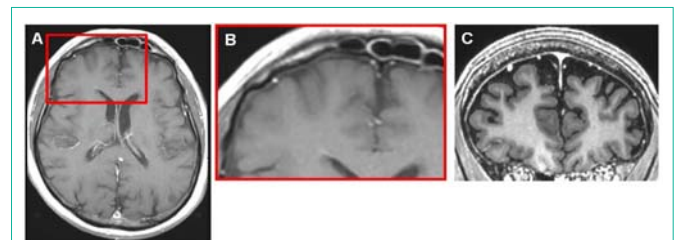


Figure 2: (A) Axial, (B) Axial Regional Enlargement, and (C) Coronal T1-weighted post-gadolinium images demonstrating resolution of the prior abnormalities 4 weeks later.

References

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2. Kim H, Ahn M, Choi S, Kim M, Sim KB, Kim J, et al. Potential role of fibronectin in microglia/macrophage activation following cryoinjury in the rat brain: an immunohistochemical study. *Brain research*. 2013; 1502: 11-19.