Listeria rhomboencephalomyelitis complicated by hemorrhagic transformation

Figure 1 MRI at presentation

MRI shows (A) ill-defined T2-hyperintense area involving the right and left middle cerebellar peduncle and inferolateral pons on fluid-attenuated inversion recovery sequence and (B) upper cervical cord on sagittal sequences in keeping with rhomboencephalomyelitis.

A 53-year-old woman presented with a 2-week history of diplopia, ataxia, and fevers. Blood cultures and CSF PCR were positive for *Listeria monocytogenes*. MRI demonstrated hyperintensity in the cerebellum, brainstem, and cervical cord (figure 1) with interval hemorrhagic transformation (figure 2). While a recognized cause of rhomboencephalitis, *Listeria* rarely involves the spinal cord concurrently.¹ Hemorrhagic transformation is a novel finding, possibly secondary to bacterial invasion with localized inflammation and necrosis of brain parenchyma and surrounding blood vessels leading to exudation of blood products. Correlating with clinical improvement after treatment with IV ampicillin, progress MRI demonstrated resolution of the hyperintensities.

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Figure 2 Progress MRI demonstrates hemorrhagic transformation

Interval MRI after 10 days demonstrates (A) new hemorrhagic over the right and left cerebellar peduncles and heterogeneous hyperintensities with (B) new patchy foci of hemorrhage in both the medulla and upper cervical cord from levels C1 to C3.

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