Teaching NeuroImage: Plexus Neuritis Following an Infection With the Tick-Borne Encephalitis Virus

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A 71-year-old man presented with an impaired range of motion and pain in his left arm that had progressed for 8 days, accompanied by headaches and neck pain. He recalled a tick bite 1 month prior. The clinical examination revealed a complete motor palsy of the left arm (0-1/5 in all muscles) and weakened reflexes of the upper and lower limbs (0-1/4). Electrophysiological examinations showed signs of axonal damage to the radial, ulnar, and median nerve on the left. MRI did not show any acute lesions of the meninges, brain, or spinal cord. Cerebrospinal fluid (CSF) showed lymphocytic pleocytosis and antibodies against tick-borne encephalitis virus (TBEV). CSF and blood samples were negative for borrelia. An MRI of the brachial plexus showed bilateral inflammation of trunks and fascicles (Figure). The findings show that TBEV infection may cause plexitis following tick bites.

**Figure: MRI of the brachial plexus.** (A) Coronal T2-weighted (T2w) fat suppressed sequence (B) T2w-hyperintense lesions at the level of the fascicles (C) trunks and (D) roots on the right and (E-F) on the left (H) Three-dimensional reconstruction of the left brachial plexus in sagittal and (I) lateral view.
References


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