

Neuroimaging Highlight

Useless Hand (of Oppenheim) Syndrome

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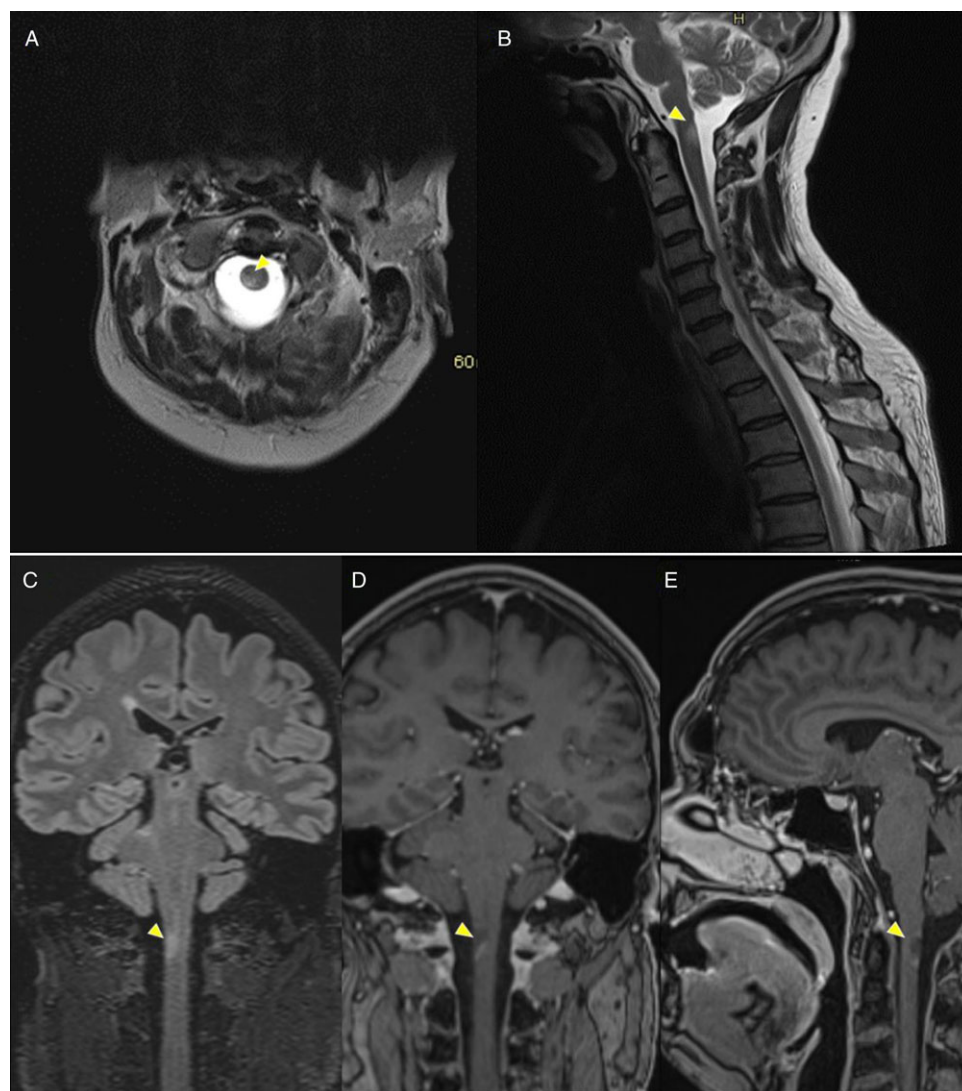


Figure 1: Hyperintensity on T2-weighted axial (A), T2-weighted sagittal (B) and T2-FLAIR coronal (C) MRI images; T1-weighted coronal and sagittal (D, E) post-gadolinium (yellow arrows) MRI images showing short-segment right posterolateral cord lesion at C1–2 that demonstrates incomplete peripheral enhancement.

A 47-year-old man presented to clinic with right hand numbness. He was diagnosed with clinically isolated syndrome 10 years prior. Now, he had a three-day history of right thumb and index finger

numbness which then progressed to affect his right arm and right leg. He had difficulty using his right hand. Physical examination revealed pseudoathetosis of his right hand ([supplementary media](#)

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clip). His strength was normal. He had normal sensation on pinprick testing of the face, arms and legs. He had markedly abnormal proprioceptive testing in the right arm compared to the left arm. Magnetic resonance imaging revealed a short-segment right posterolateral cord lesion at upper C2 that demonstrated incomplete peripheral enhancement (Fig. 1).

Given his clinical history, examination and imaging findings, he was diagnosed with relapsing remitting multiple sclerosis. His presenting syndrome was consistent with the useless hand (of Oppenheim) syndrome. He improved with pulse steroids and was subsequently started on disease modifying therapy.

Hermann Oppenheim initially described the useless hand phenomenon or the “de-afferented hand secondary to posterior column demyelination” in 1911¹ as a specific albeit rare manifestation of multiple sclerosis, in which a hand loses its functional utility due to dorsal column (position, vibration, two-point discrimination) sensory deficits with occasional presence of involuntary movements resembling that of a sensory ataxia, while maintaining relatively intact motor function. Oppenheim observed a connection with high cervical cord lesions predominantly

affecting the posterior column. While the prevalence of useless hand syndrome remains uncertain, it is a rare presentation of multiple sclerosis.²

Supplementary material. The supplementary material for this article can be found at <https://doi.org/10.1017/cjn.2024.28>.

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SC wrote, revised the manuscript, created the images and treated the patient.

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