Teaching Video NeurolImages: Reflexive movement in brain death

Challenges on clinical examination

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A 49-year-old woman found in cardiac arrest at home was resuscitated after 30 minutes. Brain CT revealed diffuse anoxic injury. After 72 hours of targeted temperature management, brainstem examination, EEG, and apnea testing were consistent with brain death. However, with applied nail bed pressure on the left hand, finger flexion was observed (video 1). This movement was deemed a spinal cord–mediated reflex, not inconsistent with brain death.¹ No other spinal reflexes were observed. In a series of brain-dead patients, 13.4% had spinal reflexes elicited.² Recognizing the semiology of these reflexes can prevent delay in diagnosis and avoid family and physician confusion.

Author contributions

Dr. Zheng: review of the literature and drafting of the case report. Dr. Garbin Di Luca: review of the literature and video footage. Dr. Margolesky: critical review of the manuscript and final approval of the version to be published.

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Disclosure

The authors report no disclosures relevant to the manuscript. Go to Neurology.org/N for full disclosures.

References

1. Khan Z, Newey CR, George P, Raber L. Finger flexion to noxious stimulation in a brain-dead patient: a case report and review of literature. *Cureus* 2018;10:e3622.
2. Dosemeci L, Cengiz M, Yilmaz M, Ramazanoglu A. Frequency of spinal reflex movements in brain-dead patients. *Transplant Proc* 2004; 36:17–19.

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