Somatic muscle fasciculations detected by electrocardiography

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A routine EKG during admission for gastrostomy in a chronically hypertensive 75-year-old patient with amyotrophic lateral sclerosis (ALS) demonstrated repetitive small depolarizations (figure). The patient had no cardiac pacemaker and was not taking any medication. A study of 550 routine EKGs revealed somatic muscle fasciculation potentials in 1%, in association with a range of lower motor neuron pathology, including postpoliomyelitis and spondylosis. Such potentials were consistently detected in EKGs of those known to have neuromuscular disorders.1 Although fasciculations are a hallmark sign in ALS, they are rarely the initially reported symptom, in contrast to those with benign fasciculations. A study by Mills2 reviewed the waveforms in both. Fasciculations noted on EKG should prompt a search for the underlying cause.

AUTHOR CONTRIBUTIONS
Dr. Webb was responsible for the study concept, drafting/revising the manuscript for content, and interpretation of data. Dr. Turner was responsible for drafting/revising the manuscript for content and interpretation of data. Dr. Craig was responsible for the study concept and interpretation of data.

REFERENCES

From the Department of Respiratory Medicine (G.J.W., S.E.C.), Royal Berkshire Hospital, Reading; and Oxford University Nuffield Department of Clinical Neurosciences (M.R.T.), John Radcliffe Hospital, Oxford, UK. Disclosure: Dr. Webb reports no disclosures. Dr. Turner receives publishing royalties for The Brain: A Beginner’s Guide (Oneworld, 2008) and Motor Neuron Disease: A Care Manual (Oxford University Press, 2010); serves as a consultant for Evaleserve, IMS Hospital Group Ltd., Smartanalyst Inc., Scivie, and Guidepoint Global; and receives research support from the Medical Research Council, the Motor Neurone Disease Association UK, and a Lady Edith Wolfson Clinician Scientist Fellowship. Dr. Craig reports no disclosures.

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