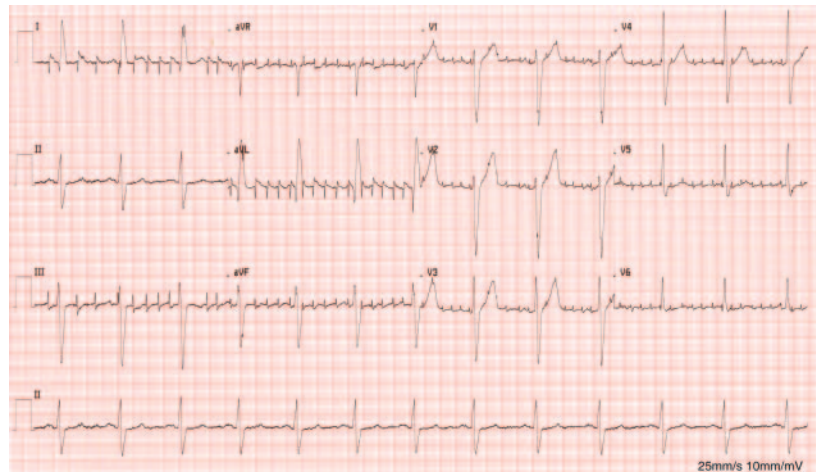


Teaching NeuroImages: Somatic muscle fasciculations detected by electrocardiography

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Figure EKG



Standard 12-lead EKG (25 mm/s, 10 mV/mm, diagnostic filter 0.05–150 Hz) showed left bundle branch block and left axis deviation consistent with left ventricular hypertrophy secondary to hypertension. Somatic muscle fasciculation potentials were visible, most obviously in leads I, III, and aVL, suggesting the responsible muscle was in the proximally weak left arm.

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 re-

viewed 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.

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