Teaching Video NeuroImage: Myokymia on Muscle Ultrasound in Radiation-Induced Brachial Plexopathy

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Supplemental: Patient consent-to-disclose form - Teaching Video demonstrating myokymia clinically, on EMG and muscle ultrasound - Teaching slides


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A 65-year-old women presented with right arm weakness and paresthesia. She had undergone radiotherapy for a supraclavicular metastasized lung cancer eight years ago. Examination revealed weakness, wasting and wavelike involuntary contractions in the right deltoid, triceps and dorsal interossei muscles. EMG confirmed a brachial plexopathy with additional myokymic discharges. Spontaneous semi-rhythmic contractions with a rotatory or to-and-fro component were seen on muscle ultrasound, compatible with myokymia (Video 1).

Myokymic discharges indicate radiation-induced plexopathy rather than tumor recurrence or other plexopathy forms, probably because myokymia arise from radiation-induced membrane instability and ectopic neural activity. Muscle ultrasound is a promising non-invasive tool for its detection, complementary to EMG. (1, 2)

**Video 1. Clinical, EMG and ultrasound findings compatible with myokymia.**

Part I: Examination reveals involuntary, wavelike contractions of the right deltoid muscle. Part II: EMG demonstrated grouped repetitive spontaneous discharges within the same motor unit with a sound resembling marching soldiers. Part III: ultrasound shows semi-rhythmic contractions with a rotatory component. These findings are characteristic for myokymia.

Video 1-http://links.lww.com/WNL/B643

Teaching Slides-http://links.lww.com/WNL/B644

**References**


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