Speech-activated myoclonus masquerading as stuttering

Figure Surface EMG during speech and during grimacing

Surface EMG of the sternocleidomastoid and pharyngeal muscles during speech revealed short-duration, high-amplitude bursts (<100 msec) suggestive of cortical myoclonus (A). This is in contrast to the relatively prolonged bursts (>250 msec) of voluntary muscle contraction, as demonstrated when the patient voluntarily grimaced as quickly as possible (B).

Despite having had normal speech until age 21 when he contracted varicella encephalitis, this 53-year-old man had always considered himself a stutterer. Neurologic examination revealed lightning-like facial and neck contractions during speech, which were absent at rest (video). Brain and cervical spine MRI had normal results. Surface EMG confirmed intermittent high-amplitude, short-duration bursts suggestive of cortical myoclonus (figure and video).

Speech-activated myoclonus is an unusual variant of segmental action myoclonus.^{1,2} The etiology in this patient was likely postinfectious, and treatment with valproic acid led to a moderate symptomatic improvement. The myoclonus occurred with speech in both English and his native Ukrainian.

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