INTRODUCTION: Chronic pain and weakness are significant factors in the onset of disability. Complete needle EMG and NCSs are often required to identify the state of nerve function as it may relate the presenting symptoms. However, recent studies have shown that acquired chronic muscle spasm, identified with needle EMG/NCV sampling with the presence of spontaneous electromyographic activity (SEA) is a common cause of both chronic pain and weakness. Current reporting techniques are typically inadequate in the presence or absence of SEA without indication of its functional significance.

OBJECTIVE: To expand current reporting techniques for needle EMG and NCSs to include precise location by muscle group of the presence and intensity of SEA.

METHODS: A severity scale of SEA and parameters for reporting is proposed. Several models of a tick to be discriminated and given point values for any muscle stretching or adjacent to muscles demonstrating SEA. Increased motor activity is in addition to increased resistance of the EMG and Nerve Conduction Studies. The proposed models include (1) No SEA on electromyographic activity (SEA); (2) Increased motor activity, whether or not SEA is observed (pSEAB); and (3) High level SEA. Requirements for measurement of SEA require that reciprocal inhibition by contralateral muscle groups cannot be demonstrated and that the muscle should be in a natural state of relaxation based upon body habitus.

RESULTS: Outcome data and correlation with pathophysiology can then be determined.

SUMMARY/CONCLUSION: Proposed addition of SEA reporting should allow for improved assessment of presenting symptoms of chronic pain and weakness.

CHRONIC MUSCLE SPASM

A Muscular Cause Of Radiculopathy

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