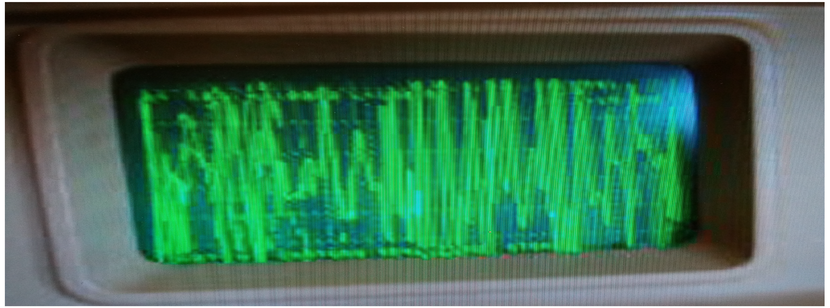
Spontaneous electrical activity in patients with acquired chronic muscle spasm and secondary chronic muscle pain. These patients had no clinical or historic evidence of nerve injury. Activity was identified only with stationary needle placement and with no decrement of activity over time. Variations of insertional activity were not considered spontaneous electrical activity. Reciprocal inhibition had to be absent. Muscle was placed in resting state.

EMG tracing minutes after injection with drug cocktail of phenoxybenzamine, lidocaine and dexamethasone. Technique was CMECD ™ procedure, reported previously.

(Coletti Method Emg guided ChemoDenervation)
Coletti, R.H., Novel Injection Technique For Chemodenervation Of Symptomatic Chronic Muscle Spasm, Abstract in Muscle & Nerve, Volume 50, Issue 4, October 2014

Spontaneous Electrical Activity in weeks and months after procedure did not recur indicating that it could not have been the result of denervated muscle.



DEBUNKING THE MYTH: DENERVATED MUSCLE IS THE SOLITARY CAUSE OF MUSCLE SPONTANEOUS ELECTRICAL ACTIVITY

INTRODUCTION: Treatment of chronic muscle spasm is confounded by the belief that spontaneous electrical activity (SEA) is only found in denervated muscle. SEA referred to herein is continuous chaotic electrical activity and without evidence of reciprocal inhibition, to be distinguished from the variety of presentations of transient increased insertional activity. Prior reports have shown that needle EMG evidence of SEA is present in acquired chronic muscle spasm which was successfully treated with needle EMG-guided chemodenervation utilizing phenoxybenzamine. OBJECTIVE: To correct needle EMG misinterpretation of nerve function and muscle pathology. METHODS: We present a survey of clinical outcomes of 93 patients with SEA treated with needle EMG-guided chemodenervation.

RESULTS: A steady state of pain relief was achieved within 1 week of the injection procedure; 76% of patients reported having had years of prior pain, 50% of patients reported complete relief of pain. Regarding the impact on overall health, wellbeing, or ability to function, 55% of patients reported a major impact and 71.4% of patients reported pain relief that lasted over 3 months.

SUMMARY/CONCLUSION: Rapid resolution of pain and disability with a high degree of sustained pain relief is inconsistent with interpretation of SEA in these patients as the result of denervated muscle. Incorrect interpretation of muscle denervation as solitary cause of SEA needs to be abandoned. The clinical impact of this finding will promote further research and treatment of the pathological state of acquired chronic muscle spasm and resultant chronic pain.