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Does EMG (dry needling) reduce myofascial pain symptoms due to cervical nerve root irritation?

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Abstract

OBJECTIVE:

EMG examination at tender points affects myofascial pain symptoms related to cervical nerve root irritation.

METHODS:

Consecutive patients with neck and arm pain had physical examinations immediately before and after having EMGs of bilateral C3-C8 myotomes. Patients were randomly chosen for EMG either at the most tender point along the palpated myofascial band or at a nonselected site. The myotomal presence of > or = 30% incidence of normal duration and amplitude, and polyphasic motor unit potentials confirm the diagnosis of cervical nerve root irritation.

RESULTS:
52% returned patient questionnaires 2 weeks post EMG examination. Group I (82/122 patients [67.2%]), averaged pain relief of 51.8 +/- 21.9%, a mean of 10.2 +/- 8 days; 14% had > or = 75% relief. The number of days of pain relief correlated positively with the percentage of pain relief ($p < 0.005$), but negatively with the number of nerve roots involved on EMG ($p < 0.05$). Group 2 (23/42 patients [54.8%]), averaged relief of 39.0 +/- 18.7%, lasting 8.8 +/- 11.2 days. None had > or = 75% pain relief. Both groups' duration of pain symptoms affected onset of relief. Evidence of bilateral multiple-level cervical nerve root irritation, especially noted at bilateral C6 and C7 levels.

CONCLUSION:
EMG at tender points on myofascial bands tends to improve symptoms. Needling these points elicits motor endplate activity and twitches, and induces more relief than when needling random points.