

## Comparing The Effectiveness of Therapeutic Ultrasound with Exercises and Cervical Mobilization with Exercises Treatment for Patients with Cervicogenic Headache

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## Abstract

*Introduction:* Cervicogenic headache(CGH) is a secondary type of headache that arises from the atlanto-occipital and upper cervical joints with neck pain. CGH displays a somewhat specific picture: unilateral headache, starting posterior and progressing to the frontal area, which is the most common headache location. In this study the effects of cervical mobilization were compared with therapeutic ultrasound treatment with exercises and ergonomic advises. The aim of this study is to find the effectiveness of therapeutic ultrasound and cervical mobilization with common exercises for both the groups on reducing pain intensity of cervicogenic headache and in improving joint range of motion.

*Methods:* The Study design is a Quasi experimental study and 30 subjects with cervicogenic headache were selected based on Inclusion and exclusion criteria and randomized into 2 groups. Group-A received therapeutic ultrasound with strengthening exercises and Group-B received cervical mobilization with strengthening exercises. The study duration was 6 weeks, 3 days/week. All subjects underwent a pre and post Intervention measurements of pain severity and joint range of motion using Numeric Pain Rating Scale and Goniometry.

*Results:* Pre and post-test were statistically analyzed and it was found that there is a significant (P <0.001) better improvement in group B [cervical mobilization with exercises] than group A [Therapeutic ultrasound with Exercise].

*Conclusion:* Cervical mobilization with exercises is more effective in relieving pain and improving joint range of motion than therapeutic ultrasound with exercise alone in patient having cervicogenic headache.

