



Effect of Combined positional stretch and ischemic compression on Cervicogenic Headache

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SUMMARY

Trigger points in cervical region muscles is mostly associated with tension type headache (T.T.H). Trigger points can be managed immediately by Ischemic compression and positional release therapy (PRT). A 62 year female who was suffering tension type headache from last 14 months was treated by combined positional release therapy and ischemic compression in 6 sessions. She had constant dull pain aggravated by the activities that include neck side bending and neck side rotation either on left or right side. At the completion of last session patient has reported her headache stopped completely. During the duration following 10 months of treatment she had no pain and did not use any medication for headache. Ischemic compression and PRT are effective in treating cervicogenic headache that have underlying cause of trigger points.

Key Words: Cervicogenic headache, Trigger points, Positional stretch release therapy

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INTRODUCTION

Cervicogenic headache is defines as pain either in cranial region, neck, upper trapezius or Sternocleidomastoid (SCM) region which radiates according to their specific pattern. Brain has no pain receptor but the coverings of brain has pain receptor.⁽¹⁾Most common headache is tension type headache.⁽²⁾Tension type headache is most prevalent and result in greater percentage of impairment as compare to others type of headache. It is muscular in origin. Diagnosis of tension type headache is depend on negative neurological finding and history from patient.⁽³⁾Tension type headache is most commonly seen in those patients who have trigger points in upper Trapezius and sternocleidomastoid muscle.⁽⁴⁾Tension type headache is most commonly seen with trigger point that is a hyperirritable spot in belly of skeletal muscle presenting with typical features of nodule formation and pain pattern. Diagnostic criteria for trigger point is given by Travel and Simon consist on major and minor criteria.⁽⁵⁾There are different treatment options for trigger point including ischemic compression, dry needling, strain counter strain, muscle energy technique, passive stretch and positional release therapy⁽⁶⁾PRT (positional release therapy) is a technique which result in reduction of pain by placing muscle in comfortable position, increase in blood flow to muscle,

decrease joint hypo mobility and make the tone of muscle normal.⁽⁷⁾Ischemic compression is a technique which result in increase of blood flow to tissues, removal of waste products and decrease in pain by applying continuous compression on trigger point for 30-90 sec.⁽⁸⁾

CASE PRESENTATION

A 62 year old female lady presented with headache of constant nature in occipital and temporal region often become severe in night from last 1.5 year approximately. Pain was reported bilateral in nature. MRI, blood test (CBC, CRP) and NCS (nerve conduction study) revealed normal findings. Patient was diagnosed with TTH and was advised antidepressants and NSAID's for one month by primary physician but no improvement over time was observed. Then patient was then referred to psychologist and received counseling session for one month but no improvement was seen. Patient was then referred to physiotherapist for assessment.

Patient reported that she experienced constant dull pain started from shoulder region and radiating to neck & head (occipital & temporal). She stated that pain aggravated by all those activities which include side bending and side rotation of neck either on left or right sidelong examination physiotherapist found bilateral active trigger points in upper Trapezius and



sternocleidomastoid slight hypnosis in cervical region and forward head posture. Diagnosis of trigger point was confirmed by following criteria given by Travel & Simon.

TREATMENT

For the treatment of trigger points patient received Ischemic compression as described by Travel⁽⁵⁾ and Positional release for respective muscles as described by D'Ambrogio et al.⁽⁹⁾ The therapist placed each muscle in position as follows while this positioning was supine lying. Head of patient's was flexed laterally toward the trigger point with shoulder abduction at 90 degree. Mid cervical area of patient's was markedly forward and lateral flexed toward the involved side.

In each position therapist assess trigger point with pincer grip and applied ischemic compression with thumb for 30-90 second and maintained this position for 5-15 minute until release was felt. treatment of one trigger point was done in one session because treatment of more than one trigger point in one session cause tenderness. Outcome measuring tool was Numeric pain rating scale (NPRS). Patient reported pain reduced from 10 to 8 at the end of first session, and second recording of pain was 6 at the end second session. At the completion of 6 sessions, patient reported her headache completely stopped. Throughout next 10 months she did not use any medication for headache.

DISCUSSION

Key role of chronic pain syndrome is trigger points.⁽⁶⁾ Trigger points result in local ischemia that lead to pain.⁽⁵⁾ There is efflux of different substances such as histamine, bradykinin and serotonin that are of inflammatory nature. These substances leads to sensitization of nociceptive receptors of membrane which result in cervicogenic headache due to central sensitization.⁽¹⁰⁾

Positional stretch is applied when muscle is placed in its outer range, increase in blood flow and removal of waste products that result in decrease pain. Application of ischemic compression for brief period lead to removal of

waste product and increase in blood flow which result in relaxation of muscle and decrease in pain.⁽⁹⁾

CONCLUSION

Combination of positional stretch and Ischemic compression is effective treatment for patients with trigger points in cervical muscles causing cervicogenic headache. These techniques may be used as an alternative or an adjunct to other therapies. The effectiveness of these therapies should be confirmed by further randomized clinical trial research.

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