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Effect of Theragun on the improvement of back flexibility: A case study

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Abstract: *Currently, there is limited evidence about Theragun. We describe the effect of Theragun on the improvement of back flexibility. After one week of the treatment, there was a considerable reduction in his tightness and improve his flexibility. Hence we propose that Theragun may be considered as the management of improvement back flexibility.*

Keywords*: Back flexibility, Theragun, Hamstring tightness, Back pain, Sit and reach, Horse riding*

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I. Introduction:

Muscle tightness may be connected to postural instability. Both can contribute to various musculoskeletal conditions.[1] Reduced extensibility resultant from increased hamstring stiffness could be a probable causative factor to low back injuries.[2] Considering that forward bending is one of the mainly common movements in daily activities, shortened hamstrings may increase the risk of injury to the spine from mechanical stresses.[2,3] Flexibility dysfunction is a extensive problem faced by common as well as sportspersons, especially in case of hamstring group of muscle.[4] Vibration therapy improves muscular strength, power improvement and kinesthetic awareness.[5]

II. Cases Study:

History: We describe a 25-year-old male patient. He is a dentist. His height was 162 centimeters, weight 65 kilograms and body mass index (BMI) was 24.8. The patient was seen by a female physiotherapist and enrolled for daily treatment. He complained of back pain that got aggravated with forwarding bending activity and prolonged sitting. He also complained of difficulty in horse riding. He belonged to a high socioeconomic class and fair family and social support. He had no history of trauma.

Physical examination: His Back movements were restricted. There were a bilateral Hamstring tightness and reduced back flexibility.

Procedure: Ethical approval was granted from the Institutional Ethical Committee and the Patient gave informed written consent. His demographic data, physical examination and the intensity of pain was done with use of numeric Pain rating Scale score was noted. Flexibility measurement was done with the use of sit and reach test and hamstrings tightness measurement was done with the use of a 90-90 straight leg raising test. Activity difficulty was measure by the use of the patient -specific functional scale.

Figure: 1

Figure: 2

He was lying down prone Position on the treatment table. He was treated with Theragun with frequency 50Hz for five minutes was applied at the hamstrings muscles belly from up to downward movement with the use of the large ball. After one week, his pain got reduced from 8 to 2 on Numeric Pain Rating Scale and Flexibility (sit and reach) score got changed from -3 to +2. Hamstring tightness was reduced. Patient-specific activity score got changed from 3 to 7.

III. Discussion

This case study provides information about the effectiveness of Theragun on improving back flexibility. This could be due to the application of theragun activate the Golgi tendon organ and results in a relaxation reaction from the higher center, which decreases the tension in the hamstring muscle, improve circulation and nutrition to the tissue that leads to decrease tightness and improve back flexibility. Also, Vibrations diminish the perception of pain through the mechanism of pain gait theory. So that reduced hamstring tightness which leads to improving back Flexibility. AS well reduced back pain and decrease activity difficulties. We would like to recommend similar research with a different kind of research design in the future.

Conclusion

Theragun is effective for improvement in the back flexibility**.** May also improve horse riding Performance.

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