



EFFECT OF FOAM ROLLING V/S STRETCHING ON QUADRICEPS, HAMSTRING & IT BAND ON KNEE PASSIVE ROM & PHYSICAL FUNCTION SCALE IN PATIENTS WITH PATELLOFEMORAL PAIN SYNDROME (RANDOMISED CONTROLLED TRIAL).

Dr. Jyoti D. Bhandari (PT)

MPT, SPB Physiotherapy College, Surat, Gujarat (India)

There are several techniques for limited and painful knee flexion but there are very few evidences about the effect of foam rolling in the patients with patellofemoral pain syndrome. [1] **OBJECTIVE :** To determine the effect of foam rolling as well as of stretching on pain and functional status in patients with patellofemoral pain. [2] **METHOD :** 30 patients diagnosed with chronic knee pain were randomized into two groups (experimental and controlled groups) with 15 subjects in each group. The experimental group received foam rolling exercises on Quadriceps, Hamstring & IT band muscles. Passive stretching of all the above mentioned muscles were given to the controlled group. The intervention was given for three alternate days per week per patient. Outcome measures were PASSIVE ROM and KOOS scale.

[3] **RESULT :** Within group analysis ($p < 0.05$) shows that both the interventions had significant effect on PROM and physical function in patients with patellofemoral pain syndrome. However, inter group analysis ($p > 0.05$) showed that there is no significant difference between the two groups in terms of outcome measures. **CONCLUSION :** Both foam rolling and conventional treatment (stretching) are effective in reducing pain and improving functional status in patients with patellofemoral pain syndrome. But the myofascial release (foam rolling) treatment showed slightly better (however, not significant) clinical improvement in terms of reduction in pain and improving functional status in patients with patellofemoral pain syndrome.

References

1. Wilke J, Müller AL, Giesche F, Power G, Ahmed H, Behm DG. Acute Effects of Foam Rolling on Range of Motion in Healthy Adults: A Systematic Review with Multilevel Meta-analysis. *Sports Med.*2020 Feb;50(2):387-402.
2. Lin WC, Lee CL, Chang NJ. Acute Effects of Dynamic Stretching Followed by Vibration Foam Rolling on Sports Performance of Badminton Athletes. *J Sports Sci Med.*2020 May 1;19(2):420-428.
3. Wilke J, Müller AL, Giesche F, Power G, Ahmed H, Behm DG. Acute Effects of Foam Rolling on Range of Motion in Healthy Adults: A Systematic Review with Multilevel Meta-analysis. *Sports Med.* 2020 Feb;50(2):387-402.
4. Lim JH, Park CB, Kim BG. The effects of vibration foam roller applied to hamstring on the quadriceps electromyography activity and hamstring flexibility. *J ExercRehabil.*2019 Aug 28;15(4):560-565.
5. Lim JH, Park CB. The immediate effects of foam roller with vibration on hamstring flexibility and jump performance in healthy adults. *J ExercRehabil.*2019 Feb 25;15(1):50-54.