

Study design Randomised control trial.

Methodology 45 subjects all with hamstring strain were prospectively included in the study, all subjects were examined clinically for hamstring injury, and they were randomly assigned into three groups (groups A, B and C) of 15 subjects each. All the subjects were tested for strength and balance (static and dynamic) prior to and after the training. The hamstring muscle of all the participants in all the three groups were treated with moist heat and followed by passive stretching. Groups A and B also received 20 and 10 min of retrowalking, respectively. The total duration of the study was 3 weeks; all the treatments were administered four times a week for a total of 12 sessions, all the outcomes were measured pre-treatment at baseline and post-treatment after 1st, 2nd and 3rd weeks.

Results The change in the determinants of quadriceps and ankle plantar flexors strength was significantly greater in the group which performed retrowalking for 20 min. Balance improved significantly in all groups except control group, but the most significant changes were seen in group A.

Conclusions The result of this study suggests that the lower extremity strength and balance were improved with retrowalking and the longer duration of training led to most significant improvement.

Clinical relevance The retrowalking can be incorporated as a safe method of lower extremity rehabilitation in hamstring strain patients.

43 EFFICACY OF RETROWALKING ON STRENGTH AND BALANCE IN PATIENTS WITH HAMSTRING STRAIN

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Background Hamstring muscle strain is one of the most common injuries in sports. Retrowalking on treadmill is a common tool for lower extremity rehabilitation in the clinical settings. However, minimal clinical research has been conducted on the effectiveness of retrowalking on hamstring strain rehabilitation. Hypothesis: (1) Hamstring strain patients may show improved lower extremity strength and balance when trained with retrowalking. (2) The longer duration of retrowalking will show significant improvement as compared to shorter duration training.