Narong Chunhom 2006: Effects of Deep Water Exercise and Conventional Therapeutic Exercise Program for Rehabilitation of Post Operative Anterior Cruciate Ligament Reconstruction in Acute Phase. Master of Science (Sports Science), Major Field: Sports Science, Interdisciplinary Graduate Program.
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The purposes of this research were to study and compare the effects rehabilitation of post operative Anterior Cruciate Ligament (ACL) reconstruction on the thigh muscle strength, range of motion, level of pain, circumference of the knee between deep water exercise and conventional therapeutic exercise after 2 week. The subjects of this study consisted of 20 patients with ACL injury by volunteer sampling. They were divided into 2 groups with 10 subjects in each group by randomly assignment. Group 1 performed deep water exercise, while group 2 performed conventional therapeutic exercise, 3 days per week for 2 week. Data were analyzed by using paired t-test and unpaired t-test. An alpha level of .05 was used for all statistical test.

The findings revealed that the thigh muscle strength in extension and flexion, range of motion in flexion, and circumference of the knee at before and after 2nd week of operation were significant differences ($p < .05$). There are significant differences for range of motion in extension and flexion, and level of pain between the deep water exercise group and the conventional therapeutic exercise group ($p < .05$). Therefore, the deep water exercise could help increased in range of motion and reduced level of pain after 2nd week of post operative ACL reconstruction.

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