ABSTRACT

Outcomes after long-term injuries such as anterior cruciate ligament reconstruction (ACLR) need improving. One area which has received limited research attention is the use of aquatic therapy to optimize the functional recovery process after injury. There is still limited understanding of what the benefits of the pool can bring for rehabilitation and particularly what and when can be done in the pool after injury. This clinical commentary describes how the application of the properties of water can support the functional recovery process after ACLR. Here it is proposed that the main properties (density, hydrostatic pressure, buoyancy and viscosity) of aquatic therapy, if applied correctly to rehabilitation practices, can be used to achieve six primary goals after ACLR: 1) assist in the reduction of pain and swelling; 2) support the recovery of gait; 3) support the maintenance and/or development of cardiovascular fitness; 4) help accelerate and optimize motor pattern retraining; 5) allow for earlier introduction of plyometrics and power training and 6) support the between session recovery and optimal load management, particularly in the later phases of rehabilitation. If implemented correctly, the presented phased protocol can support practitioners in implementing or delivering aquatic therapy rehabilitation services to their injured athletes. To support implementation, the authors have provided a specific protocol and supplementary videos for the use of aquatic therapy after ACLR.

Level of Evidence: 5

Key Words: Anterior cruciate ligament, aquatic therapy, rehabilitation, research translation

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