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In-home telerehabilitation for persons with a proximal humerus fracture: A pilot study

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Abstract

A brief review of the literature shows that 10% of elderly falls result in a fracture. Fractures involving the proximal humerus are very common and require a rehabilitation follow-up. Currently, rehabilitation services are greatly suboptimal and underutilized. New strategies must then be developed to enhance accessibility of services. Teletreatment is a growing alternative to traditional face-to-face therapy to meet the demand in the rehabilitation field. Telerehabilitation, a subgroup of Teletreatment approach is a telehealth application which uses telecommunications technologies to deliver rehabilitation interventions in the patient's home, without a professional visit. The main purpose of this study is to investigate the feasibility of an in-home teletreatment program for persons with proximal humerus fracture. A pre-experimental pilot study with pre/post-tests without a control group was performed. 10 participants have been recruited and performed one hour sessions of exercises with a physiotherapist, once or twice a week for 8 weeks. Our study showed clinically relevant positive changes in shoulder function, pain and range of motion of the participants. Participant satisfaction was also evaluated and has demonstrated good acceptance of this new method of services enhancing. These results indicate the clinical relevance of teletreatment for this population. Further studies are needed with a more powerful design (e.g. control group) to measure the efficacy of this novel way of delivering a rehabilitation program for proximal humerus fracture via teletreatment.

Biography

François Cabana is an Orthopaedic surgeon at the Centre hospitalier universitaire du CHUS. He has completed his medical training and his medical postdoctoral training with specialization in orthopaedic surgery at the Université Laval (Québec). His principal research themes are tissue engeneering in orthopaedic surgery, Car driving simulation and musculoskeletal affections, Orthopaedics robotics, Disc degeneration, Orthopaedic biomechanical assessment, spinal fracture and Vertebroplasty.

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