Upper Extremity Robotic Therapy is Effective in Post-stroke Hemiplegia: a Randomized Controlled Trial

Background: Robots have been used in upper extremity rehabilitation, but little is known about the efficacy of robotics in subacute rehabilitation.

Purpose: To evaluate whether robotic therapy as compared to a self training program would improve upper extremity function in subacute post stroke hemiplegic patients.

Methods: Prospective, single-blinded, randomized, multicenter clinical trial. Participants were randomized to one of two interventions for six weeks (7 days a week) in addition to standard rehabilitation: 40 minutes of robotic therapy or 40 minutes of self-training (control group).

Primary Endpoint: Improvement in upper extremity using Fugl-Meyer Assessment (FMA)

Results: Robotic therapy used in conjunction with standard rehabilitation increased upper extremity mobility recovery in post-stroke and severe hemiplegic patients.