

Impact of a web-supported programme of Constraint Induced Therapy following stroke (LifeCIT)

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Background

Upper extremity (UE) movement is often compromised following a stroke. Constraint Induced Therapy (CIT) is an evidence-based intensive intervention (1) which involves people with stroke practicing activities with their affected hand whilst wearing a mitt on their other hand, but it relies on intensive therapy. A study trialling CIT in a community setting without a therapist present found key barriers to be lack of motivation to wear the mitt and comply with the exercise programme (2). A web supported CIT system (LifeCIT) for UE stroke rehabilitation was developed to address this barrier.

Objective

To evaluate the impact of using LifeCIT for UE stroke rehabilitation compared to usual care in subacute/chronic stroke patients at home.

Methods

Subacute/chronic stroke patients were randomized into a three week intervention consisting of LifeCIT or control groups. UE impairment and function were assessed with the Motor activity log (MAL), Fugl-Meyer (FMA-UE) and Wolf Motor Function Test (WMFT) pre and post intervention and at a six month follow-up.

Results

Sixteen patients completed the trial. Between group differences, favouring the LifeCIT group in MAL (AOU and QOU) and WMFT (FAS) were identified post intervention (ANCOVA) and controlled for baseline clinical scores, Orpington score and Sub-acute/chronic. Mean improvement in the LifeCIT group MAL from baseline to post treatment (1.02 AOU and QOU) and at six months (0.6 AOU and QOU) was above the minimally clinically important difference (MCID) for the MAL (MCID = 0.5) Improvement in the LifeCIT group WMFT (FAS) met MCID from baseline to post intervention (0.35) and at six months (0.3) FAS MCID=0.2 - 0.4. Interview data confirmed positive acceptance of LifeCIT.

Conclusion

Use of LifeCIT in the community improved UE function in subacute/chronic stroke patients following a three week intervention and at a six month follow-up, suggesting a larger scale study should be run.

References

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