Is a Lycra sleeve an Acceptable Treatment for Glenohumeral Subluxation in People with Stroke: Patients, Clinicians and Family Members Perspectives

Praveen Kumar*, Rob Jones**, Chris Easton**, Ailie Turton*
*University of West of England
**University Hospital Bristol NHS Foundation Trust

Background

- Glenohumeral subluxation (GHS) is reported in up to 81% of patients with stroke.
- Our previous study found that a Lycra sleeve can reduce GHS (Ultrasound measurements of Acromion-greater tuberosity Distance) in people with chronic stroke (n=5).
- Our recent study on healthy participants (n=31) found reduction in AGT, changes in scapula measurements and in muscle activity after the application of Lycra sleeve.
- Similar findings were reported from another study on people with chronic stroke (n=6) suggesting that Lycra sleeve has potential to alter shoulder biomechanics in people with stroke.

Methods

Design: A prospective cohort study

Time Frames for data collection: Immediately after enrolment into the study and at 3 months following first set of measurements for both groups.

Sample size: We aim to recruit up to 50 patients over a period of 9 months.

Randomisation: Patients are randomised to either receive Lycra sleeve (Figure 1) immediately or after 3 months.

Aims

1) Explore patients’, carers and staff perception, regarding acceptability of Lycra sleeves as a treatment.
2) Test the feasibility of measurements of GHS, pain, spasticity and arm function in people with recently diagnosed stroke before and after using the sleeve.
3) Obtain an estimate of the potential rate of recruitment in a centre to plan for the future trial.

Clinical measures:

- Ultrasound measurement of GHS (Figure 2)
- Passive Range of movement
- Muscle strength – muscles in the upper limb
- Modified Ashworth Scale
- Motor Assessment Scale sections 6,7,8 for the upper limb
- ‘ShoulderQ’ – A Shoulder pain questionnaire
- ‘Health SF12’ Quality of Life questionnaire
- A questionnaire to gain feedback from patients, carers, nursing staff and therapists regarding the use of the sleeve.
- An ‘Aphasia friendly’ questionnaire to be used to gain feedback from patients with communication disorders.

Ethical Approval

Ethical approval gained from the South West - Frenchay Research Ethics Committee. REC reference: 17/SW/0173
HRA approval and University Hospital Bristol Research and Development received
Data collection underway

Acknowledgements

1) Above and Beyond Charity, University Hospitals Bristol NHS Foundation Trust for funding this study
2) Jobskin Ltd UK, for supplying the Lycra sleeves

Contact details:
Dr Praveen Kumar (Chief Investigator)
Senior Lecturer in Physiotherapy, UWE
Email: Praveen.Kumar@uwe.ac.uk
Robert Jones (Principal Investigator)
Lead Stroke Physiotherapist, UHBristol
Email: Robert.Jones@UHBristol.nhs.uk

Figure 1: Application of Lycra sleeve

Figure 2: Ultrasound measurement of GHS