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Can taping improve hand posture and use in infants with brain lesions?

Submission date
04/07/2012

Recruitment status
No longer recruiting

Registration date
16/08/2012

Overall study status
Completed

Last Edited
28/01/2019

Condition category
Nervous System Diseases

[X] Prospectively registered
[_] Protocol
[_] Statistical analysis plan
[X] Results
[_] Individual participant data

Plain English summary of protocol

Background and study aims
Children who sustain damage to the developing brain often develop contractures (a permanent shortening of a muscle or joint) leading to thumb and wrist deformity. Early intervention with elastic taping prior to the development of contractures may help to improve thumb and wrist position, and hopefully have beneficial effects on function. However, this approach has not been well evaluated although it has begun to be used in clinical practice. The aim of this study is to determine the feasibility and acceptability of using elastic taping for this purpose in infants and young children, and to look for effects on hand and wrist posture and function.

Who can participate?
Infants and young children aged 6 months to 3 years who have difficulties with hand and wrist posture and use, worse on one side than the other, following an injury to the developing brain

What does the study involve?
Children are randomly allocated to one of two groups. One group receives routine care for 2 weeks then taping for 2 weeks. The other group receives taping for the 4-week period of the study. Videotaped assessments of hand and wrist posture and function are undertaken at baseline, 2 and 4 weeks with tape on and tape off. Families also complete a home diary and questionnaire to provide feedback regarding the experience.

What are the possible benefits and risks of participating?
Taping is noninvasive and safe. The trialists check for skin sensitivity to the tape. It is not known at this stage whether taping is beneficial. However, if taping is felt to help a participant, treatment is continued after the study within the clinical service.

Where is the study run from?
Child Development Centre, Newcastle upon Tyne NHS Hospitals Foundation Trust (UK)

When is the study starting and how long is it expected to run for?
September 2012 to September 2014

Who is funding the study?
British Academy of Childhood Disability/Royal College of Paediatrics and Child Health (UK)

Who is the main contact?
1. Dr Anna Basu (anna.basu@ncl.ac.uk)
2. Dr Jill Kisler (jill.kisler@nuth.nhs.uk)

Contact information

Type(s)
Scientific

Contact name
Dr Jill Cadwgan

Contact details
Evelina London Children's Hospital
St Thomas' Hospital
Westminster Bridge Road
London
United Kingdom
SE1 7EH

Additional identifiers

Study information

Scientific Title
Can taping improve hand posture and use in infants with brain lesions? A feasibility study

Study objectives
The aim of this pilot study is to determine, in infants and young children with asymmetric brain injury affecting hand posture and function:
1. The feasibility and acceptability of using elastic tape applied to the thumb, wrist and arm
2. Whether the elastic tape has a beneficial effect on hand and wrist posture and function both immediately when applied and in the longer term.

Ethics approval required
Old ethics approval format

Ethics approval(s)
Not provided at time of registration

Study design
Pilot randomised single-blinded (assessor) single-centre study. Based on a randomised cross-over design except that in the second time interval both groups will receive the intervention.

Primary study design
Interventional

Study type(s)
Treatment

Health condition(s) or problem(s) studied
Elastic tape as intervention for hand and wrist posture and function after early brain damage

Interventions
Application of elastic tape with intent to improve thumb and wrist posture and function.

Children are randomised to one of two groups, one receiving routine care for 2 weeks then taping for 2 weeks. The other group receive taping for the 4 week period of the study. Videotaped assessments of hand and wrist posture and function are undertaken at baseline, 2 and 4 weeks with tape on and tape off. Families also complete a home diary and questionnaire to provide feedback regarding the experience.

Intervention Type
Other

Phase
Not Applicable

Primary outcome(s)
1. Feasibility and acceptability of the intervention
2. Change in score on Assisting Hand Assessment (AHA)

Key secondary outcome(s))
1. Thumb position, measured using the House Thumb classification
2. Hand and wrist position, measured using the Zancolli classification

Completion date
03/09/2014

Eligibility

Key inclusion criteria
1. Infants and young children age 6 months to 3 years
2. Asymmetric abnormalities of hand and wrist posture and function secondary to non-progressive brain lesions and including acquired brain injury

Participant type(s)
Patient

Healthy volunteers allowed
No

Age group
Child

Lower age limit
6 months

Upper age limit
3 years

Sex
All

Key exclusion criteria
1. Known allergy to tape adhesive
2. Known progressive or degenerative disorder
3. Already recruited to another trial
4. Other splinting already in use

Date of first enrolment
03/09/2012

Date of final enrolment
03/09/2014

Locations

Countries of recruitment
United Kingdom

England

Study participating centre
Royal Victoria Infirmary
Newcastle upon Tyne
United Kingdom
NE14LP

Sponsor information

Organisation
Newcastle upon Tyne NHS Hospitals Foundation Trust (UK)

ROR
https://ror.org/05p40t847

Funder(s)

Funder type
Charity

Funder Name
British Academy of Childhood Disability (UK) - Paul Polani Research Fund

Results and Publications

Individual participant data (IPD) sharing plan

IPD sharing plan summary
Not provided at time of registration

Study outputs

Output type	Details	Date created	Date added	Peer reviewed?	Patient-facing?
Results article	results	01/01/2020	28/01/2019	Yes	No