

Therapeutic effects of an advanced hippotherapy simulator in children with cerebral palsy

Submission date 19/02/2009	Recruitment status No longer recruiting	<input type="checkbox"/> Prospectively registered
Registration date 27/02/2009	Overall study status Completed	<input checked="" type="checkbox"/> Protocol
Last Edited 20/07/2010	Condition category Nervous System Diseases	<input type="checkbox"/> Statistical analysis plan
		<input type="checkbox"/> Results
		<input type="checkbox"/> Individual participant data
		<input type="checkbox"/> Record updated in last year

Plain English summary of protocol

Not provided at time of registration

Contact information

Type(s)

Scientific

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Additional identifiers

Study information

Scientific Title

Study of the therapeutic effects of an advanced hippotherapy simulator in children with cerebral palsy: a randomised controlled trial

Study objectives

To analyse the therapeutic effects or the contraindications of the use of a commercial hippotherapy simulator on several important factors relating to children with cerebral palsy (CP) such as their motor development, balance control in the sitting posture, hip abduction range of motion and electromyographic (EMG) activity of adductor musculature.

Ethics approval required

Old ethics approval format

Ethics approval(s)

Local Ethics Committee (CEIC Aragón) gave approval on the 6th June 2008 (ref: CP04/06/08)

Primary study design

Interventional

Study design

Randomised controlled clinical trial

Study type(s)

Quality of life

Health condition(s) or problem(s) studied

Cerebral palsy

Interventions

The patients were classified into five levels according to the Gross Motor Function Classification System and subsequently randomly divided into two treatment groups:

1. Treatment Group with hippotherapy simulator (maintaining sitting posture, with legs in abduction and rhythmic movement of the simulator)
2. Treatment Group maintaining sitting posture, with legs in abduction and without rhythmic movement of the simulator

The randomising will be centralised and generated by computer to ensure a similar distribution of the possible confusion variables in both groups. The assignment sequence will be hidden. In cases where tutors or children do not wish to participate, their reasons will be recorded.

The independent variable in this study is the assigned therapeutic modality (treatment with hippotherapy simulator, or maintenance of sitting posture with legs in abduction but without rhythmic movement of the emulator). Each child will receive 10 treatment sessions. There will be one session a week of 15 minutes. The children not included in the simulator group are offered 10 treatment sessions with the simulator after the study has been completed. The dependent variables are:

1. Sitting balance
2. Measurement of hip abduction range of motion
3. Electromyographic activity in adductors
4. Gross motor function

Follow-up will continue until three months post-treatment completion.

Intervention Type

Other

Phase

Not Applicable

Primary outcome(s)

Sitting balance:

1. Measurement of hip abduction range of motion, measured using an electronic inclinometer and traditional goniometer
2. Electromyographic activity in adductors, measured using surface electromyography (EMG)
3. Gross motor function, measured with the Gross Motor Function Measure (GMFM) and Sitting Assessment Scale (SAS)

Key secondary outcome(s)

Satisfaction of participants, measured using a 0 - 10 scale.

Completion date

01/10/2009

Eligibility**Key inclusion criteria**

Children between 4 and 18 years old (either sex) with CP, who attend schools run by the Education Department of the Government of Aragon (Spain) and whose tutors have signed an informed consent form.

Participant type(s)

Patient

Healthy volunteers allowed

No

Age group

Child

Lower age limit

4 Years

Upper age limit

18 Years

Sex

All

Key exclusion criteria

1. Children who have undergone selective dorsal rhizotomy
2. Acute convulsions not controlled by medication
3. Allergy to electrode adhesives
4. Visual impairment not corrected with glasses
5. Those circumstances or associated illnesses that in the judgment of the researcher might interfere with the results or be detrimental to the children
6. Inability to attend intervention sessions or refusal to participate

Date of first enrolment

01/10/2008

Date of final enrolment

01/10/2009

Locations

Countries of recruitment

Spain

Study participating centre

C/ Belle Epoque 27 Local

Zaragoza

Spain

50019

Sponsor information

Organisation

Regional Government of Aragon (Spain)

ROR

<https://ror.org/0425pg203>

Funder(s)

Funder type

Government

Funder Name

Regional Government of Aragon (Spain) - Department of Research, Innovation and Development
(ref: PM059/2007)

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?
Protocol article	protocol	16/04/2010		Yes	No