Effect of Intrathecal Baclofen Therapy on Pain and Social Participation in Children with Spastic Cerebral Palsy

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INTRODUCTION

Background
- Children and adolescents with CP engage in fewer social activities with peers than those without disabilities.
- Pain is one factor that can limit social participation and is a phenomenon frequently experienced by youth with CP.

Purpose of Study
To determine whether a reduction in pain following ITB is associated with an increase in social participation in children with spastic CP.

Hypotheses
1. ITB intervention will be associated with decreased pain in children with spastic CP.
2. Decreased pain will be associated with increased social participation in children with spastic CP.

DESIGN & METHODS

Participants
Nine children and adolescents, ages 3-22, with spastic CP and their caregivers

Measures
- Caregiver Priorities and Child Health Index of Life with Disabilities (CPCHILD)
- Caregiver report of the health status, well-being, activity limitations, and ease of care for children with severe CP
- Children’s Assessment of Participation and Enjoyment (CAPE)
- Measure of participation in leisure and recreational activities for children and young adults with or without disabilities

Procedures
- Baseline data collected prior to ITB placement
- Follow-up data collected at 6, 12, and 24 Months post-ITB placement
- Questionnaires completed at each data collection point

RESULTS

<table>
<thead>
<tr>
<th>Participant</th>
<th>Frequency</th>
<th>Intensity</th>
<th>Number</th>
<th>Percent of Total</th>
<th>Age</th>
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<tbody>
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<td>+</td>
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<td>5</td>
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<td>16</td>
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<td>+</td>
<td>NC</td>
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</table>

Note: NC = No Change
* Participant showed hypothesized change in both pain and social participation scores.

Primary findings:
- Majority of participants experienced a decrease in both the frequency (n = 7) and intensity (n = 5) of pain from baseline to six months.
- Majority of participants (n = 5) experienced an increase in the number of activities engaged in with friends, as well as the percentage of their total activities this represented, from baseline to six months.
- No clear relationship between changes in pain scores and changes in social participation scores. Only three participants showed both a decrease in pain and an increase in social participation.
- Data beyond six months was limited and highly variable.

Post-hoc findings:
- Relationships between pain and social participation continued to vary after grouping pain scores into categories according to when the pain occurs:
  - During stationary activities
  - During movement
  - During lying down/sleep
- Gross Motor Function Classification System (GMFCS) level also was not associated with changes in either pain or social participation.
- Age may interact with changes in pain and social participation as the three participants who experienced decreased pain and increased social participation were among the oldest participants in the sample.

CONCLUSIONS

- ITB intervention appears to be effective for reducing pain in this population.
- In this small sample, changes in ratings of pain were not a strong indicator of changes in social participation among children and adolescents undergoing ITB intervention.
- Reductions in pain, however, likely offer numerous other physical and psychological benefits.
- Changes in social participation following ITB may be the result of several interacting factors (e.g. age).

IMPLICATIONS FOR PRACTICE

- Reductions in pain from ITB intervention may improve a child’s ability to participate in occupational therapy, particularly in performing self-care activities.
- Pain does not dictate participation. OTs can assist children and families in finding ways to facilitate participation with peers despite continued pain.
- OTs can assist clients to capitalize on gains made possible by ITB intervention.

RESOURCES


ACKNOWLEDGEMENTS

Thank you to Dr. Ruth Benedict for her guidance and support throughout this project. I also thank my teammates, Joanna Thomsen and Gao Yang, and the families that made this research possible. This research was supported by the Cerebral Palsy International Research Foundation, the Pedal-with-Pete Foundation, and the Waisman Center Spasticity and Movement Disorders Clinic.

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