A multidisciplinary community based rehabilitation programme improved social functioning in severe traumatic brain injury


QUESTION: In patients with severe traumatic brain injury (TBI), does a multidisciplinary community based outreach rehabilitation programme improve activities of daily living, social participation, and psychological wellbeing?

Design
Randomised (allocation concealed*), blinded (outcome assessors)*, controlled trial with a mean follow up of 24.8 months.

Community outreach programme v information only in traumatic brain injury at a mean of 24.8 months follow up

<table>
<thead>
<tr>
<th>BICRO-39 Scores</th>
<th>Median change scores (range)</th>
<th>P value†</th>
</tr>
</thead>
<tbody>
<tr>
<td>Outreach</td>
<td>Information</td>
<td></td>
</tr>
<tr>
<td>Total Score</td>
<td>2.5 (-1.7 to 6.2)</td>
<td>0.9 (-4.1 to 6.8)</td>
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<tr>
<td>Maximum gain index</td>
<td>1.6 (0.2 to 2.6)</td>
<td>1.0 (0.0 to 3.3)</td>
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<tr>
<td>Self organisation</td>
<td>0.4 (-2.8 to 2.2)</td>
<td>0.1 (-1.5 to 3.1)</td>
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<tr>
<td>Psychological wellbeing</td>
<td>0.6 (-2.0 to 2.8)</td>
<td>0.2 (-1.8 to 1.3)</td>
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</table>

BICRO-39—Brain Injury Community Rehabilitation Outcome-39
†Probability levels for group comparisons (Mann-Whitney U tests).

COMMENTARY

In 1998, Chesnut et al published an evidence based analysis of TBI rehabilitation. They were able to draw few positive conclusions about the efficacy of rehabilitation due to the dearth of available evidence. This important study by Powell et al provides a welcome counterpoint as it supports the usefulness of ongoing community based rehabilitation for people with TBI. Particularly noteworthy is the design, one of the few randomised controlled trials related to community based rehabilitation; the inexpensive intervention; the similarity of the intervention to other publicly funded community based rehabilitation programmes; and that change occurred many years after TBI.

There are several limitations in the study. Firstly, the 2 primary outcome measures used had substantial ceiling and floor effects (BI and 2 subscales of the BICRO-39). The use of other available measures of community integration might have avoided this problem. Secondly, the outreach group did not make substantive gains in terms of returning to paid employment, school, and/or childcare nor in terms of improving non-family social contact, 2 key indicators of successful community integration. It is possible, as the authors suggest, that obstacles beyond the control of therapist and/or patient are the reason for this. However, altering some of the parameters of the therapy may have a positive effect. This study contributes to the growing body of evidence suggesting that multifaceted rehabilitation approaches provide the best outcomes, but also illustrates that more needs to be done.

The take home message is this: functionally based rehabilitation shows promise for improving day to day life for people with severe TBI even many years after injury. Although further evidence is needed to substantiate these findings and address questions about the content, intensity, duration, and timing of rehabilitation, time since injury should not preclude referral to community based services.

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