Nidotherapy for Schizophrenia

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Background

Nidotherapy is a therapeutic method that principally aims to modify the environment of people with schizophrenia and other serious mental illnesses, whilst working in conjunction with or alongside other treatments. Rather than focusing on direct treatments or interventions, the aim is to help the individual identify the need for, and work to effect, environmental change with the aim of minimizing the impact of any form of mental disorder on the individual and society.

Objectives

To review the effects of nidotherapy added to standard care, compared with standard care or no treatment for people with schizophrenia or related disorders.

Search Methods

We searched the Cochrane Schizophrenia Group Trials Register (December 2011) and supplemented this by contacting relevant study authors, hand searching nidotherapy articles and manually searching reference lists.

Selection Criteria

All randomized controlled trials (RCTs) that compared nidotherapy with standard care or no treatment.

Data Collection and Analysis

The identified trial study was reliably selected, quality assessed and data extracted. For non-skewed continuous endpoint data extracted from valid scales, we estimated mean difference (MD) between groups. We calculated risk ratios (RR) and 95% confidence intervals (CI) of homogeneous dichotomous data. Skewed data have been presented in tables as “other data,” which acknowledge mean and standard deviation.

Main Results

We included only one study that compared nidotherapy-enhanced standard care with standard treatment or care alone (total 52 participants); this study was classified by its authors as a “pilot study.” The duration of the included study was 18 months in total. The single study examined the short-term (up to 6 months) and medium-term (between 6 and 12 months) effects of nidotherapy-enhanced standard care versus standard treatment or care.

Nidotherapy-enhanced standard care was favored over standard treatment or care for social functioning in both the short term (n = 50, 1 RCT, MD −2.10, 95% CI −4.66–0.46) and medium term (n = 37, 1 RCT, MD −1.70, 95% CI −4.60–1.20); however, these results did not reach statistical significance (figure 1). Results concerning engagement with non-inpatient services favored the intervention group in both the short term (n = 50, 1 RCT, MD 2.00, 95% CI 0.13–3.87) and medium term (n = 37, 1 RCT, MD 1.70, 95% CI −0.09 to 3.49), with statistical significance evident in the short term but not in the medium term (figure 1). Results of people leaving the study early favored the intervention (n = 52, 1 RCT, RR 0.86, 95% CI 0.06–12.98), with slight favor of the control group at medium term (n = 50, 1 RCT, RR 0.99, 95% CI 0.39–2.54); again, these results did not reach statistical significance. Results for the adverse effects/events of death (measured by 12 months) favored the intervention (n = 52, 1 RCT, RR 0.29, 95% CI 0.01–6.74) but with no statistical significance. Skewed results were available for mental state, service use, and economic outcomes, and present a mixed picture of the benefits of nidotherapy (table 1).
Functioning: specific – social – change in average score (SFQ-KW, better = low)

<table>
<thead>
<tr>
<th>Study or Subgroup</th>
<th>Nidotherapy Mean</th>
<th>SD</th>
<th>Total</th>
<th>Control Mean</th>
<th>SD</th>
<th>Total</th>
<th>Weight</th>
<th>Mean Difference IV, Fixed, 95% CI</th>
<th>Mean Difference IV, Fixed, 95% CI</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.1.1 short term (&lt;6 months)</td>
<td>11.1</td>
<td>4.4</td>
<td>26</td>
<td>13.2</td>
<td>4.8</td>
<td>24</td>
<td>100.0%</td>
<td>-2.10 [-4.66, 0.46]</td>
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<tr>
<td>Ranger 2009</td>
<td></td>
<td></td>
<td></td>
<td>26</td>
<td></td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Subtotal (95% CI)</td>
<td>26</td>
<td></td>
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</tr>
<tr>
<td>Heterogeneity: Not applicable</td>
<td>Test for overall effect: Z = 1.61 (P = 0.11)</td>
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<tr>
<td>1.1.2 medium term (6-12 months)</td>
<td>11.5</td>
<td>4.7</td>
<td>20</td>
<td>13.2</td>
<td>4.3</td>
<td>17</td>
<td>100.0%</td>
<td>-1.70 [-4.60, 1.20]</td>
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<tr>
<td>Ranger 2009</td>
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<td>20</td>
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<tr>
<td>Heterogeneity: Not applicable</td>
<td>Test for overall effect: Z = 1.15 (P = 0.25)</td>
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</tbody>
</table>

Test for subgroup differences: Chi² = 0.04, df = 1 (P = 0.84), I² = 0%

Service outcomes: engagement with non-inpatient services – change in average score (EAS, better = high)

<table>
<thead>
<tr>
<th>Study or Subgroup</th>
<th>Nidotherapy Mean</th>
<th>SD</th>
<th>Total</th>
<th>Control Mean</th>
<th>SD</th>
<th>Total</th>
<th>Weight</th>
<th>Mean Difference IV, Fixed, 95% CI</th>
<th>Mean Difference IV, Fixed, 95% CI</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.3.1 short term (&lt;6 months)</td>
<td>10.8</td>
<td>3.1</td>
<td>26</td>
<td>8.8</td>
<td>3.6</td>
<td>24</td>
<td>100.0%</td>
<td>2.00 [0.13, 3.87]</td>
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<td>Ranger 2009 (1)</td>
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<td>26</td>
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<tr>
<td>Subtotal (95% CI)</td>
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<tr>
<td>Heterogeneity: Not applicable</td>
<td>Test for overall effect: Z = 2.10 (P = 0.04)</td>
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<tr>
<td>1.3.2 medium term (6-12 months)</td>
<td>11.1</td>
<td>2.3</td>
<td>20</td>
<td>8.4</td>
<td>3.1</td>
<td>17</td>
<td>100.0%</td>
<td>1.70 [0.09, 3.49]</td>
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<tr>
<td>Ranger 2009</td>
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<tr>
<td>Subtotal (95% CI)</td>
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<td>Heterogeneity: Not applicable</td>
<td>Test for overall effect: Z = 1.87 (P = 0.06)</td>
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</tbody>
</table>

Test for subgroup differences: Chi² = 0.05, df = 1 (P = 0.82), I² = 0%

(1) Note: graph labels reversed to reflect that high score in EAS = better

Fig. 1. Forest plots.
### Table 1. Summary of Findings Table

Nidotherapy-enhanced Standard Care compared with Standard Care for people with schizophrenia

**Patient or Population:** Patients with People with Schizophrenia  
**Settings:** Intervention: Nidotherapy-enhanced Standard Care  
**Comparison:** Standard Care

<table>
<thead>
<tr>
<th>Outcomes</th>
<th>Illustrative comparative risks (95% CI)</th>
<th>No. of participants (studies)</th>
<th>Quality of the evidence (GRADE)</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Assumed risk</strong></td>
<td><strong>Corresponding risk</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Functioning—specific—social—change in average score—medium term (6–12 months)</strong> Social Functioning Questionnaire—Key Worker (SFQ-KW). Scale: from 0 to 24. Follow-up: 12 months</td>
<td>The mean functioning—specific—social—change in average score—medium term (6–12 months) in the control groups was 13.2 points</td>
<td>The mean functioning—specific—social—change in average score—medium term (6–12 months) in the intervention groups was 1.70 lower (from 4.6 lower to 1.2 higher)</td>
<td>37 (1 study)</td>
<td>⊕⊕⊕⊕ very low&lt;sup&gt;b,c&lt;/sup&gt;</td>
</tr>
<tr>
<td><strong>Functioning—general—no important change—medium term (6–12 months)—not measured</strong></td>
<td>See comment</td>
<td>See comment</td>
<td>Not estimable</td>
<td>See comment</td>
</tr>
<tr>
<td><strong>Mental state—no important change—medium term (6–12 months)</strong> Brief Psychiatric Rating Scale (BPRS). Scale: from 0 to 96. Follow-up: 12 months</td>
<td>The mean mental state - no important change—medium term (6–12 months) in the control groups was 0</td>
<td>The mean mental state—no important change—medium term (6–12 months) in the intervention groups was 0 higher (from 0 to 0 higher)</td>
<td>37 (1 study)</td>
<td>⊕⊕⊕⊕ low&lt;sup&gt;c,e&lt;/sup&gt;</td>
</tr>
<tr>
<td><strong>Quality of life—no important change—medium term (6–12 months)—not measured</strong></td>
<td>See comment</td>
<td>See comment</td>
<td>Not estimable</td>
<td>See comment</td>
</tr>
<tr>
<td><strong>Satisfaction with treatment</strong></td>
<td>See comment</td>
<td>See comment</td>
<td>Not estimable</td>
<td>See comment</td>
</tr>
<tr>
<td><strong>Economic outcomes—total costs (12 months)</strong> NHS Reference Costs and unit costs Follow-up: 12 months</td>
<td>The mean economic outcomes—total costs (12 months) in the control groups was 0</td>
<td>The mean economic outcomes—total costs (12 months) in the intervention groups was 0 higher (from 0 to 0 higher)</td>
<td>48 (1 study)</td>
<td>⊕⊕⊕⊕ low&lt;sup&gt;c&lt;/sup&gt;</td>
</tr>
</tbody>
</table>

<sup>a</sup>Comparative risks estimated using a random effects model.  
<sup>b</sup>Dorting et al.  
<sup>c</sup>Prieto-Merino et al.  
<sup>d</sup>Mandall et al.  
<sup>e</sup> See comment for a description of the indirect estimation methods.  
<sup>f</sup> See comment for a description of the direct estimation methods.
## Table 1. Continued

Nidotherapy-enhanced Standard Care compared with Standard Care for people with schizophrenia

<table>
<thead>
<tr>
<th>Outcomes</th>
<th>Standard Care</th>
<th>Nidotherapy-enhanced Standard Care</th>
<th>Relative effect (95% CI)</th>
<th>No. of participants (studies)</th>
<th>Quality of the evidence (GRADE)</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Adverse effects—specific—death Number of individual deaths of participants Follow-up: 12 months</td>
<td>42 per 1000</td>
<td>12 per 1000 (from 0 to 281)</td>
<td>RR 0.29 (from 0.01 to 0.67)</td>
<td>52 (1 study)</td>
<td>⊕⊕⊕⊕ very low&lt;sup&gt;a,b&lt;/sup&gt;</td>
<td></td>
</tr>
</tbody>
</table>

**Note:** GRADE Working Group grades of evidence

- **High quality:** Further research is very unlikely to change our confidence in the estimate of effect. Moderate quality: Further research is likely to have an important impact on our confidence in the estimate of effect and may change the estimate. Low quality: Further research is very likely to have an important impact on our confidence in the estimate of effect and is likely to change the estimate. Very low quality: We are very uncertain about the estimate.

- <sup>a</sup>The basis for the assumed risk (e.g., the median control group risk across studies) is provided. The corresponding risk (and its 95% CI) is based on the assumed risk in the comparison group and the relative effect of the intervention (and its 95% CI). CI, Confidence interval; RR, Risk ratio.

- <sup>b</sup>Risk of bias: rated “serious”—co-author of study developed the SFQ scale, unclear if validated.

- <sup>c</sup>Imprecision: rated “serious”—only one study reported results on this outcome.

- <sup>d</sup>Publication bias: rated “strongly suspected”—SFQ patient version results mentioned but not reported.

- <sup>e</sup>Imprecision: rated “very serious”—highly skewed data.

- Indirectness: rated “serious”—all costs presented as an average, with wide scatter of costs in both intervention and control groups.

- Risk of bias: rated “serious”—only one death recorded from control group—causes of death unknown; “homicide was suspected but no one was charged.”

- Inconsistency: rated “very serious”—small sample size with one death; unknown facts/causes leading to death.
Authors’ Conclusions
Further research is needed into the possible benefits or harms of this newly-formulated therapy. Until such research is available, patients, clinicians, managers, and policymakers should consider it an experimental therapy.

Reference