TITLE: Guanfacine for the Treatment of Attention Deficit Hyperactivity Disorder in Pediatric Patients: Clinical Effectiveness

DATE: 16 May 2011

RESEARCH QUESTION

What is the clinical effectiveness of guanfacine for pediatric patients with attention deficit hyperactivity disorder?

KEY MESSAGE

Evidence suggests that guanfacine extended release (GXR) is safe and effective in both the short and long-term in treating pediatric patients with ADHD.

METHODS

A limited literature search was conducted on key resources including PubMed, The Cochrane Library (2011, Issue 4), University of York Centre for Reviews and Dissemination (CRD) databases, Canadian and major international health technology agencies, as well as a focused Internet search. No filters were applied to limit the retrieval by study type. Where possible, retrieval was limited to the human population. The search was also limited to English language documents published between Jan 1, 2006 and May 9, 2011. Internet links were provided, where available.

The summary of findings was prepared from the abstracts of the relevant information. Please note that data contained in abstracts may not always be an accurate reflection of the data contained within the full article.

RESULTS

Rapid Response reports are organized so that the higher quality evidence is presented first. Therefore, health technology assessment reports, systematic reviews, and meta-analyses are presented first. These are followed by randomized controlled trials and non-randomized studies.
Three randomized controlled trials and two non-randomized studies were identified pertaining to the clinical effectiveness of guanfacine for the treatment of attention deficit hyperactivity disorder (ADHD) in pediatric patients. No relevant health technology assessment reports, systematic reviews, or meta-analyses were identified. Additional information that may be of interest is included in the appendix.

OVERALL SUMMARY OF FINDINGS

Overall, evidence from randomized and non-randomized studies suggests that guanfacine extended release (GXR) at doses of one to four milligrams per day may result in significant improvements in ADHD symptoms in pediatric patients between the ages of six and 17.\textsuperscript{1-4} Guanfacine may also be safe and effective for the long-term treatment of ADHD in children.\textsuperscript{3,4} Additional study details are provided in Table 1. No information specific to hyperactivity was identified.

<table>
<thead>
<tr>
<th>Table 1: Details of included studies</th>
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<tbody>
<tr>
<td><strong>Author, Date, Study type</strong></td>
</tr>
<tr>
<td>Kollins, 2011, RCT\textsuperscript{1}</td>
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<tr>
<td>Connor, 2010, RCT\textsuperscript{2}</td>
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<tr>
<td>Biederman, 2008, RCT\textsuperscript{3}</td>
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</tbody>
</table>
### Table 1: Details of included studies

<table>
<thead>
<tr>
<th>Author, Date, Study type</th>
<th>Study population, length of study</th>
<th>Interventions</th>
<th>Results</th>
<th>Author Conclusions; Comments</th>
</tr>
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<tbody>
<tr>
<td>Sallee, 2009, NRS&lt;sup&gt;4&lt;/sup&gt;</td>
<td>Children 6-17 years with ADHD who had previously been exposed to GXR. 2 years</td>
<td>GXR 1,2,3,4 mg/day with or without a psychostimulant.</td>
<td>GXR was found to have efficacy from the first through to the 24&lt;sup&gt;th&lt;/sup&gt; month of therapy.</td>
<td>Authors concluded that GXR was generally safe and effective as monotherapy. Open-label extension study, 77.1% discontinuation rate.</td>
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<tr>
<td>Biederman, 2008, NRS&lt;sup&gt;5&lt;/sup&gt;</td>
<td>Children 6-17 years with ADHD who had previously participated in a randomized trial. 2 years</td>
<td>GXR 2-4 mg/day</td>
<td>All doses of GXR resulted in improvements in the ADHD Rating Scale IV.</td>
<td>Authors concluded that GXR was safe for long-term use and effectiveness was maintained throughout the study period.</td>
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ADHD = attention deficit hyperactivity disorder; GXR = guanfacine extended release; mg = milligrams; NRS = non-randomized study; RCT = randomized controlled trial
REFERENCES SUMMARIZED

Health technology assessments
No literature identified.

Systematic reviews and meta-analyses
No literature identified.

Randomized controlled trials


Non-randomized studies


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APPENDIX – FURTHER INFORMATION:

Systematic reviews- comorbid tic disorders


Secondary analyses


Review articles


Additional references
