Review: some evidence suggests that cognitive behaviour therapy may reduce chest pain in the short term in patients with non-specific chest pain and normal coronary anatomy


Are psychological treatments effective for patients with non-specific chest pain and normal coronary anatomy?

METHODS

Data sources: Cochrane Review Group Specialised registers (November 2002); Cochrane Library (Issue 3, 2002); Medline (1966–2002); CINAHL (1982–2002); EMBASE/Excerpta Medica (1980–2002); PsychLit (1887–2002); Biological Abstracts BIOSIS (1990–2002); reference lists of relevant studies and reviews; abstracts from cardiology, psychiatry, and psychiatry conferences; and personal communication with authors.

Study selection and assessment: randomised controlled trials (RCTs) that compared psychological interventions (cognitive behaviour therapy [CBT], relaxation therapy, hyperventilation control, or other psychotherapy, talking, or counselling therapy) with standard care, an attention placebo, or no intervention in patients with non-specific chest pain, atypical chest pain, or syndrome X and normal coronary anatomy. Patients receiving drug treatment for psychiatric disorders were excluded. Individual study quality was assessed based on randomisation, allocation concealment, blinding, and loss to follow up.

Outcomes: significant reduction in chest pain (pain intensity measured by categorical or visual analogue scales; or mean difference in pain scores or frequency of exacerbation).

MAIN RESULTS

8 RCTs (403 outpatients) met the selection criteria. Interventions assessed were CBT, brief nurse intervention, relaxation training, and breathing retraining. Follow up ranged from 3–36 months, and 5 trials had >80% follow up.

Meta-analysis using a fixed effects model showed that more patients who received psychological interventions (specifically CBT) had reductions in chest pain than those in the control group at 3 months and at 3–9 months (table). Similar results were found using a random effects model. Meta-analysis of 2 trials (n = 81) also showed that patients who received psychological interventions had a greater increase in chest pain free days at ≤3 months (standardised mean difference [SMD] 0.83, 95% CI 0.36 to 1.31).

Meta-analysis using a fixed effects model showed that patients who received CBT or guided re-breathing had greater reductions in chest pain frequency than those in the control group at 3 months (5 trials, n = 201, SMD = −0.87, CI −1.18 to −0.57) and at 3–9 months (3 trials, n = 124, SMD = −0.43, CI −0.79 to −0.07). However, analysis using a random effects model did not find significant differences between groups (SMD −0.83, CI −1.77 to 0.12 at 3 mo; −0.36, CI −0.90 to 0.18 at 3–9 mo).

CONCLUSIONS

Limited evidence exists on the effectiveness of psychological interventions for patients with non-specific chest pain and normal coronary anatomy. Some evidence suggests that cognitive behaviour therapy may reduce chest pain for up to 3–9 months.

Cognitive behaviour therapy (CBT) v control in patients with non-specific chest pain and normal coronary anatomy*

<table>
<thead>
<tr>
<th>Outcomes</th>
<th>Number of trials [n]</th>
<th>CBT</th>
<th>Control</th>
<th>RRR [95% CI]</th>
<th>NNT [CI]</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chest pain at 3 months</td>
<td>3 (172)</td>
<td>64%</td>
<td>93%</td>
<td>32% [19 to 43]</td>
<td>4 (3 to 6)</td>
</tr>
<tr>
<td>Chest pain at 3–9 months</td>
<td>2 (111)</td>
<td>54%</td>
<td>93%</td>
<td>42% [24 to 55]</td>
<td>3 (2 to 5)</td>
</tr>
</tbody>
</table>

*Abbreviations defined in glossary; weighted event rates, RRR, NNT, and CI calculated from data in article.
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