LETTER

Pulmonary rehabilitation in patients with MRC Dyspnoea Scale 2

The recent INTERCOM study emphasises the point that community-based rehabilitation is effective, even in patients with chronic obstructive pulmonary disease (COPD) with less advanced airflow obstruction. However, COPD and pulmonary rehabilitation guidelines recommend offering pulmonary rehabilitation (PR) to patients who consider themselves functionally disabled (usually defined as MRC Dyspnoea Scale grades 3 or above).2 3 We wished to test whether less breathless patients with COPD (ie, MRC Dyspnoea Scale grade 2) also benefit from PR.

METHODS

All patients with MRC grade 2 dyspnoea referred to the Lambeth & Southwark Community Pulmonary Rehabilitation Team between the years 2004–7 were included in the study. Patients were offered PR at one of two hospital or five community sites. Each programme consisted of two supervised sessions per week for 8 weeks (with one unsupervised home session) delivered by the same team. Outcome measures were the incremental shuttle walk (ISW), the Chronic Respiratory Disease Questionnaire Dyspnoea score (CRQ-D) and the Hospital Anxiety and Depression Scale (HAD-Anxiety and HAD-Depression). Patients with COPD with MRC dyspnoea grades 3 or 4 undertaking PR over the same time period acted as controls. Changes in outcomes between patients with MRC grade 2 and those with MRC grades 3 or 4 dyspnoea before and after PR were compared using t tests or Mann-Whitney tests.

RESULTS

The results were analysed for 126 patients with MRC grade 2 dyspnoea and 316 with MRC grades 3/4 dyspnoea who completed PR (attended >8 supervised sessions). The groups were well matched for age (mean 69 vs 68 years), gender (50% vs 43% male) and mean forced expiratory volume in 1 s (58% vs 54% predicted), although the MRC grade 2 group had increased ISW (304 vs 201 m; p<0.001), less dyspnoea (median CRQ-D 3.2 vs 2.6) and reduced anxiety and depression scores (median HAD-Anxiety 6.0 vs 9.0; median HAD-Depression 5.0 vs 8.0). Following PR, the MRC grade 2 dyspnoea group showed similar improvements in ISW, CRQ-D, HAD-Anxiety and HAD-Depression to the MRC grades 3/4 dyspnoea group (table 1).

Table 1 Effects of pulmonary rehabilitation in patients with MRC 2 and MRC 3/4 dyspnoea

<table>
<thead>
<tr>
<th>Outcomes</th>
<th>Change following PR</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>MRC 2</td>
</tr>
<tr>
<td>Mean (SD) ISW (m)</td>
<td>83 (7)</td>
</tr>
<tr>
<td>Median (25th, 75th centile) ISW% change</td>
<td>27 (12, 45)</td>
</tr>
<tr>
<td>Mean (SD) CRQ-D</td>
<td>0.75 (0.11)</td>
</tr>
<tr>
<td>Median (25th, 75th centile) HAD-anxiety</td>
<td>−1 (−3, 1)</td>
</tr>
<tr>
<td>Median (25th, 75th centile) HAD-depression</td>
<td>0 (−2.5, 1)</td>
</tr>
</tbody>
</table>

HAD, Hospital Anxiety and Depression Scale; ISW, incremental shuttle walk; PR, pulmonary rehabilitation.

DISCUSSION

Although patients with MRC dyspnoea grade 2 referred for PR have better exercise capacity and fewer symptoms of dyspnoea, anxiety or depression than patients with MRC dyspnoea grades 3/4, they show similar improvements with PR. Exercise-based interventions for COPD should not ignore less severe patients (either in terms of lung function or subjective dyspnoea).

W D-C Man, A Grant, L Hogg, J Moore, R D Barker, J Moxham

Department of Respiratory Medicine, King’s College Hospital and Lambeth & Southwark Pulmonary Rehabilitation Team, Harefield, UK

Correspondence to W D-C Man, Harefield Hospital, Hill End Road, Harefield UB9 6JH, UK; research@williamman.co.uk

Funding WD-CM is supported by a National Institute for Health Research Clinician Scientist award. The views expressed in this publication are those of the authors and not necessarily those of the NHS, The National Institute for Health Research or the Department of Health.

Competing interests None.

Provenance and peer review Not commissioned; not externally peer reviewed.

Accepted 8 February 2010

Thorax 2010; 65:1.

doi:10.1136/thx.2010.136085

REFERENCES


Pulmonary rehabilitation in patients with MRC Dyspnoea Scale 2

W D-C Man, A Grant, L Hogg, J Moore, R D Barker and J Moxham

Thorax published online September 29, 2010

Updated information and services can be found at:
http://thorax.bmj.com/content/early/2010/09/29/thx.2010.136085

These include:

References
This article cites 3 articles, 2 of which you can access for free at:
http://thorax.bmj.com/content/early/2010/09/29/thx.2010.136085#BIBL

Email alerting service
Receive free email alerts when new articles cite this article. Sign up in the box at the top right corner of the online article.

Notes

To request permissions go to:
http://group.bmj.com/group/rights-licensing/permissions

To order reprints go to:
http://journals.bmj.com/cgi/reprintform

To subscribe to BMJ go to:
http://group.bmj.com/subscribe/