



ORIGINAL ARTICLE

Effectiveness of a respiratory rehabilitation programme in patients with chronic obstructive pulmonary disease[☆]



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KEYWORDS

Respiratory therapy;
Chronic obstructive pulmonary disease;
Self-management;
Education;
Exercise;
Quality of life

Abstract

Objective: To evaluate the effectiveness of the multidisciplinary respiratory rehabilitation (RR) programme in patients with severe or very severe chronic obstructive pulmonary disease pre the RR programme, at the end of the programme and one year after the RR, measuring changes in ability to exercise (walking test), effort tolerance (forced expiratory volume (FEV1)) and health-related quality of life.

Method: Quasi-experimental single group design. We included patients diagnosed with severe or very severe chronic obstructive pulmonary disease (stages III and IV of the GOLD classification) who entered the rehabilitation programme for the years 2011 and 2012. Demographic data, questionnaires on general health-related quality of life (SF-36) and specific to respiratory patients (St George's Respiratory Questionnaire), FEV1% and exercise capacity test (running test 6 min) were collected. Data were collected before the RR programme, at the end of the RR programme and a year after completing the programme.

Results: No significant differences in FEV1% values were observed. Regarding exercise capacity, an increase in distance walked in the walking test was noted, which changed significantly after training, 377 ± 59.7 – 415 ± 79 m after one year ($p < .01$). A statistically significant improvement in mean scores of HRQoL was observed, except for the emotional role dimension of the SF-36 questionnaire.

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PALABRAS CLAVE

Terapia respiratoria;
Enfermedad
pulmonar obstructiva
crónica;
Autocuidado;
Educación;
Ejercicio;
Calidad de vida

Conclusion: A pulmonary rehabilitation programme for 8 weeks improved the exercise capacity, dyspnoea and quality of life of patients with severe and very severe chronic obstructive pulmonary disease.

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Efectividad de un programa de rehabilitación respiratoria en pacientes con enfermedad pulmonar obstructiva crónica

Resumen

Objetivo: Evaluar la efectividad de un programa de rehabilitación respiratoria (RR) multidisciplinar en pacientes con enfermedad pulmonar obstructiva crónica grave o muy grave preprograma RR, al terminar el programa y al año de haber realizado la RR midiendo los cambios producidos en: la capacidad de ejercicio (test de marcha), mejoría en la tolerancia al esfuerzo (volumen espiratorio forzado [FEV1]) y en la calidad de vida relacionada con la salud.

Método: Diseño cuasiexperimental con un solo grupo. Se incluyeron a pacientes con diagnóstico de enfermedad pulmonar obstructiva crónica grave o muy grave (estadios III y IV de la clasificación GOLD) que entraron en el programa de RR entre 2011 y 2012. Se recogieron datos demográficos, calidad de vida relacionada con la salud general (SF-36) y específica para enfermos respiratorios (Cuestionario Respiratorio St. George), FEV1% y test de capacidad de ejercicio (prueba de la marcha de 6 min). La recogida de datos se realizó preprograma RR, al terminar el programa de RR y al año de haber acabado el programa.

Resultados: No se observaron diferencias significativas en los valores de FEV1%. Respecto a la capacidad de ejercicio se observó un aumento de la distancia recorrida en el test de marcha, que se modificó significativamente después del entrenamiento, de $377 \pm 59,7$ a 415 ± 79 m al año ($p < 0,01$). Se observó una mejoría estadísticamente significativa en las 3 dimensiones del Cuestionario Respiratorio St. George. Las medias de las puntuaciones obtenidas de la calidad de vida relacionada con la salud mejoraron significativamente en todas las dimensiones excepto en la dimensión rol emocional del cuestionario SF-36.

Conclusión: Un programa de RR de 8 semanas de duración mejora la capacidad de realizar ejercicio, la disnea y la calidad de vida en pacientes con enfermedad pulmonar obstructiva crónica grave y muy grave.

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What is known?

Pulmonary or respiratory rehabilitation is one of the key recommendations in COPD treatment as it may improve tolerance to exercise and quality of life in this type of patient. In the declaration of the American Thoracic Society/European Respiratory Society (ATS/ERS) it is recommended that there be an educational component to RR in self-care skills, and particularly in the management of flare-ups for their detection and treatment.

What does this article contribute?

An RR programme of 8-week duration undertaken by patients with severe or very severe COPD, together with an intervention from the attending nurse which included phases of assessment, planning of care and health education, with improvement in both the capacity for exercise and quality of life.

Introduction

Chronic obstructive pulmonary disease (COPD) is a common disease associated with heavy consumption of health resources, comorbidity and increased mortality¹⁻⁵ and which is becoming increasingly important, due to the increase of chronicity associated with the ageing population. In developed countries COPD is the fourth cause of death after coronary disease, ictus and cancer. Its specific rates of prevalence according to age are that of 14.3% and 3.9% for men and women, respectively, with overall prevalence varying between 4.9% and 18%. These morbidity and mortality characteristics, together with the increase in incidence for those over 75 (176/100,000 inhabitants) and the obvious causal relationship with tobacco habits have a huge health-care and social-economic impact.⁶ In Spain, the EPI-SCAN (Epidemiologic Study of COPD in Spain) study conducted in 2006–2007, quantified the rate of COPD in the Spanish population between 40 and 80 years of age as 10.2%.⁷

Chronic respiratory diseases and particularly COPD are commonly expressed in clinical terms as dyspnoea. This progressively limits everyday activities for the patients and a loss of autonomy, leading to a high level of disablement, with the physical, emotional and social disorders that this

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