

P96 TO EXPLORE THE PREVALENCE AND IMPACT OF HIP AND/OR KNEE IN PATIENTS PRESENTING FOR PULMONARY REHABILITATION

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Background It is widely reported that individuals with COPD frequently present with co-morbidities. Osteoarthritis is an important co-morbidity that may affect an individual's ability to participate fully in pulmonary rehabilitation (PR). There is little data exploring the impact of osteoarthritis upon PR.

Aim To explore the prevalence and impact of hip and knee pain in patients attending PR and the impact of PR, that could be either detrimental or advantageous upon joint pain.

Methods Patients completed standard PR outcome measures, including the Incremental Shuttle Walking Test (ISWT), Endurance Shuttle Walk Test (ESWT) and the COPD Assessment Test (CAT). The Oxford Hip and Oxford Knee questionnaires^{1 2} were also completed for all 4 joints pre and post PR. These questionnaires are validated, 12-item, patient reported outcome measures with a single composite score to describe the perception and impact of joint pain, over the last 4 weeks.¹⁰ represents the most perceived pain and 48 the least perceived pain. Patients participated in a 6 week outpatient PR programme, comprising supervised exercise and group-based education. This included an individually prescribed walking programme, cycling and upper and lower-limb strength training. Patients also completed an unsupervised home-exercise programme.

Results n=68 attended a PR assessment (COPD n=47, bronchiectasis n=6, asthma n=5, ILD n=7, other n=3), 55.6% male; mean age 68.7±10.2 years. At baseline, 15 patients reported knee pain, 10 reported hip pain and 17 reported both hip and knee pain (62% of patients assessed). Post PR, hip and knee pain scores improved but only improvements in right knee pain reached significance (p<0.05). The ISWT, ESWT and CAT scores also improved and exceeded the MCID pre-post PR (table 1). 12 patients did not complete PR, 5 reported comorbidities as the primary reason with 3 participants reported bilateral hip pain.

Abstract P96 Table 1 Baseline and post PR outcome measures for completers

	Baseline	Post PR	p value
Right hip pain	43.2 (8.9)	43.3 (9.0)	0.908
Left hip pain	39.7 (11.7)	40.7 (10.7)	0.133
Right knee pain	41.1 (10.3)	42.4 (10.1)	0.027
Left knee pain	40.9 (10.7)	41.9 (9.7)	0.090
ISWT (m)	248 (155)	315 (167)	<0.001
ESWT (sec)	196 (121)	611 (373)	<0.001
CAT	23.1 (6.7)	20.9 (8.6)	0.018

Conclusion A significant number of participants presented with joint pain at the time of initial assessment for PR.

Overall, participants improved their exercise capacity and reduced their symptom burden from their COPD. PR was not detrimental to joint pain. Alongside increases in exercise capacity, we observed slight improvements in joint pain.

P97 RESPONSES OF EXACERBATION PHENOTYPES OF COPD TO COMMUNITY PULMONARY REHABILITATION

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Rationale Chronic Obstructive Pulmonary Disease (COPD) patients with frequent exacerbations are recognised as a distinct clinical phenotype. There are calls for studies to investigate treatment responses within clinical phenotypes of COPD. Pulmonary rehabilitation is considered one of the most beneficial treatments for COPD including a reduction in risk of exacerbations. However, clinical outcomes of pulmonary rehabilitation between frequent and infrequent exacerbators remain unclear. The aim of this study was to examine responses to pulmonary rehabilitation in frequent and infrequent exacerbators of COPD.

Methods 73 mild to very severe COPD patients (FEV₁ pred, 51%±18%) were enrolled on to community pulmonary rehabilitation. COPD patients were categorised as frequent (2 or more exacerbations (requiring treatment) in the past 12 months) or infrequent exacerbators (1 or less exacerbations). The primary outcome was successful completion of pulmonary rehabilitation defined as attending a minimum number of 12 sessions. The following outcomes were analysed for patients who completed initial and final assessment: incremental shuttle (ISWT) and endurance shuttle walk tests (ESWT), chronic respiratory disease questionnaire (CRQ), and hospital anxiety and depression scale (HADS).

Results Fewer frequent exacerbators completed pulmonary rehabilitation compared to infrequent exacerbators (45% vs 69%, p=0.048). Both groups experienced statistically significant improvements in ISWT (p<0.001) and ESWT (p<0.001) performance, but no group ×time interactions (ISWT, p=0.198; ESWT, p=0.453) or group differences were observed (ISWT, p=0.911; ESWT, p=0.688). There was a significant improvement in disease specific quality of life (CRQ (all domains), p<0.05; depression, p=0.025) with pulmonary rehabilitation but no significant effects were observed with anxiety (p=0.138). No significant effects of group or group ×time interaction on disease specific quality of life domains, anxiety (p=0.920; p=0.298) or depression (p=0.808; p=0.644) were observed.

Conclusion Frequent exacerbators are less likely to successfully complete pulmonary rehabilitation, but those who complete appear to experience similar improvements to infrequent exacerbators. Pulmonary rehabilitation should be encouraged in both frequent and infrequent exacerbators of COPD, but additional support or targeted interventions may be required for frequent exacerbators to complete the programme.