P102 EFFECTS OF SUPERVISED MAINTENANCE EXERCISE FOLLOWING PULMONARY REHABILITATION ON EXERCISE CAPACITY AND SYMPTOMS IN COPD: A ONE YEAR OBSERVATIONAL PROSPECTIVE STUDY

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Introduction and objectives Pulmonary Rehabilitation (PR) improves exercise capacity and symptoms in patients with Chronic Obstructive Pulmonary Disease (COPD). However, the clinical benefits of supervised maintenance exercise following the completion of standard PR remains unclear. This study aimed to determine the effects on exercise capacity and symptoms in a maintenance exercise programme compared to usual care following standard PR completion.

Methods Following completion of PR, prospective data was collected between June 2017 to June 2018 from COPD patients attending a once weekly supervised maintenance exercise class and those receiving usual care. Key outcomes were the Incremental Shuttle Walk Test (ISWT) and COPD Assessment Test (CAT). Self-reported exacerbations and associated hospital admissions were also collected.

Results Forty four COPD patients were included [maintenance n=28 (15 male), mean (SD) age 74.5 (± 6.6) years, FEV1 59.3 (± 21.3)% predicted, MRC 3.1 (± 0.6); control n=16 (8 male), mean (SD) age 71.3 (± 9.8) years, FEV1 57.5 (± 22.8)% predicted, MRC 3 (± 0.7)]. From baseline to follow up, there were significant, clinically relevant, mean differences in ISWT and CAT score between the maintenance and the control group (ISWT -0.3 m, 95% CI -21.7 to 21 vs -92.1 m, 95% CI -70.6 to -113.7 respectively, mean difference between groups 91.8 m, 95% CI 62.4 to 121.2, $p \leq 0.0001$; CAT -1.8, 95% CI -4.3 to 0.6 vs +5, 95% CI 1.7 to 8.2 respectively, mean difference between groups -6.8, 95% CI -10.7 to -2.8, $p = 0.0013$). There was no significant difference between groups in self-reported exacerbations ($p = 0.91$) or hospital admissions ($p = 0.24$).

Conclusion A once weekly supervised exercise class following completion of PR prevented clinically relevant deterioration in exercise capacity and symptoms in patients with COPD compared to standard care. Further validation is warranted to determine the relevance of maintenance PR on long term health and service configuration.

Abstract P102 Figure 1 Mean change in incremental shuttle walk test from baseline to 12 months

P103 THE RELATIONSHIP BETWEEN A DIRECT MEASURE OF PHYSICAL ACTIVITY AGAINST SELF-REPORTED PHYSICAL ACTIVITY, MUSCLE STRENGTH, QUALITY OF LIFE AND EXERCISE CAPACITY IN PULMONARY SARCOIDOSIS

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Background Sarcoidosis is a diverse condition. The condition currently has a limited body of knowledge surrounding the effect and role of physical activity, diet and exercise on quality of life and disease management. Yet, physical activity is frequently suggested as beneficial within sarcoidosis however little is currently known about physical activity patterns within the condition as well as its role and effect on other key physiological and mental variables. Additionally, self-reported measures such as the IPAQ are regularly utilised within research due to their ease of use and low cost however their validity and accuracy within sarcoidosis in comparison to an objective measure (tri-axial accelerometer) is currently unknown.

Methods A lab-based approach was utilised with participants visiting twice to validate their variable measurements. Participants undertook exercise capacity (6 MWT), lung function (FEV₁, FVC, PEF), muscle strength (HGS, QPT, HPT, EFMS), quality of life (SHQ) and fatigue (FAS) tests in addition to wearing a tri-axial accelerometer for five days between visits.

Results Participants recorded above recommended levels of physical activity via the accelerometer (152 mins MVPA per day) and was strongly correlated to self-reported MVPA (0.875, $p = 0.022$) although a large difference was recorded (52 mins per day) between the two methods. Handgrip strength was strongly correlated with gender (0.809), body fat percentage (0.794), elbow flexor muscle strength (0.961) and forced vital capacity (0.865).

Conclusions Physical activity patterns are diverse within sarcoidosis much like the general public, while physical activity's relation to other variables appears limited although the variables are multi-faceted. Handgrip strength and six-minute walk distance may be a good indicator of a range of other key variables within the condition.

P104 RETROSPECTIVE EVALUATION OF ILD SPECIFIC PULMONARY REHABILITATION PROGRAM: IMPROVEMENT IN EXERCISE CAPACITY AND QUALITY OF LIFE SCORES

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Introduction Pulmonary Rehabilitation (PR) is of proven benefit in patients with Chronic Obstructive Pulmonary Disease. Less is known regarding the benefit in Interstitial Lung Disease (ILD) or whether all stages of ILD would benefit from PR. Greater Glasgow and Clyde Health Board has run an 8 week ILD specific rehabilitation program since 2016. We aimed to study outcomes in terms of exercise capacity, breathlessness and anxiety scores and whether GAP Index affected outcomes.