Is Pulmonary Rehabilitation an Effective Programme to Manage Post-COVID Breathlessness?

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BACKGROUND

Long COVID syndrome is an emerging chronic condition which presents after acute infection with SARS-CoV-2.
Patients report a broad constellation of symptoms including breathlessness and reduced exercise tolerance .[1,2]
The Office for National Statistics (ONS) estimates that up to 1.3 million people are living with self-reported long COVID symptoms[3], meaning effective strategies to manage symptoms are vital to improve quality of life.

NICE recommends pulmonary rehabilitation (PR) as a management option for patients with dyspnoea.

In February 2021 a regional long COVID service was set up for the assessment of patients in Cheshire and Merseyside. After an initial telephone consultation, patients could be referred to PR for assessment and management of respiratory symptoms.

METHODS

Retrospective review of patients referred to PR from the Cheshire and Merseyside Long COVID service from 1st March to 30th April 2021.
Respiratory symptoms were assessed during a structured telephone consultation using self-reported BORG[4] score of perceived exertion and Medical Research Council (MRC) dyspnoea scale.
Scores following completion of PR were compared to initial scores.

RESULTS

Of the 88 patients,

- 48 (54.5 %) completed the PR programme
- 37 (42.0%) reported improvement in their symptoms: either an increased exercise tolerance, reduction in their BORG or MRC scores or improved breathing management.

Despite some patients having no objective improvement in symptoms, feedback was positive, including that it was "helpful and beneficial" to their recovery. 8 (9.1%) self-discharged prior to PR and 23 (25%) had poor adherence to the PR programme and were discharged without completing the programme. Of all patients who completed PR, 3 (6.3%) required further management of their symptoms.

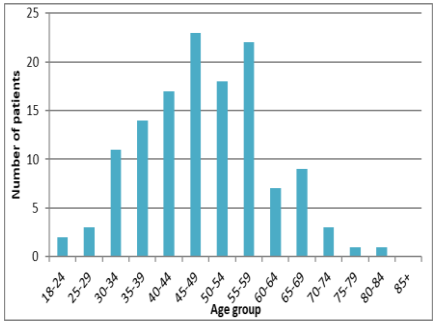

Figure 1: Patient demographics of those referred to PR between March and April, 2021.

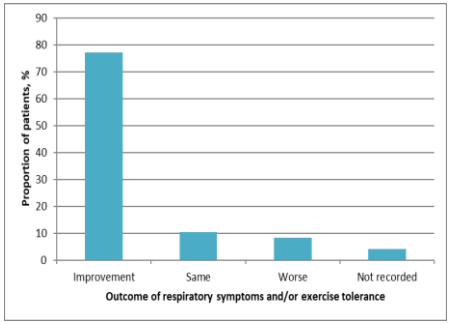

Figure 2: Patient reported outcomes following completion of PR.

CONCLUSION

Our results show that engaging with a PR programme is an effective management strategy for breathlessness. This is supported by previous studies in patients with Long COVID.[2]

We found that patients reported a positive experience even if there had been no improvement in BORG or MRC score.

The educational material shared with patients improves confidence in self-managing symptoms. As studies in the COPD patient population have shown, this also improves psychological symptoms such as depression and anxiety.[5]

Further evaluation should assess reasons for poor adherence to the PR programme and strategies to improve this.

Given a proportion of patients required further review for persistent symptoms, the feasibility of an extended PR programme should be considered.

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