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| **Changes in 6MWD in patients with pulmonary arterial hypertension over a 24-month period.** |
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| **Introduction:**  Our research questions were: (i) what proportion of patients with pulmonary arterial hypertension (PAH) have a clinically meaningful deterioration in 6MWD within 24 months of their first six-minute walk test (6MWT)? (ii) what are the characteristics of those who deteriorate? (iii) what proportion of those who deteriorate return to baseline 6MWD within the following 12 months?  **Methods:**  Retrospective analysis of data from the Advanced Lung Disease unit at Fiona Stanley Hospital, WA. Inclusion criteria were: patients with PAH undergoing usual care, with at least three 6MWT performed within 24 months following the first 6MWT and, in those who deteriorated, at least two 6MWTs in the following 12 months. Clinically meaningful deterioration was defined as a reduction in 6MWD greater than the minimally important difference of 34m. Data on age, sex, and World Health Organisation (WHO) functional status classification (dichotomised into I-II *vs* III-IV) were included in the analyses.  **Results:**  179 patients (age 54±16yr; 121 females) met the inclusion criteria. Of these, 106 (59%) had a clinically meaningful deterioration in 6MWD within 24 months. Compared to those who did not deteriorate, those who did were older (mean difference 8yr, 95% CI 3 to 12), had a lower initial 6MWD (-56m, 95% CI -91 to -21) and a greater proportion had poorer functional status (WHO III-IV) (58% vs 31%; p=0.001). Older age and poorer WHO functional status increased the odds of deterioration (odds ratio 1.03, 95% CI 1.00 to 1.06; and 3.2, 95% CI 1.5 to 6.5; respectively). Forty-four of the 106 participants who deteriorated (42%) returned to baseline 6MWD within the following 12 months.  **Conclusion:**  Clinically meaningful deterioration in 6MWD in patients with PAH within a 24-month period is common and associated with older age and poorer functional status. However, nearly half who deteriorate recover within the following 12 months.  **Grant Support:** South Metropolitan Health Service (Fiona Stanley Fremantle Hospitals Group), Allied Health Building Research Capacity initiative (8 days of research time)**.**  **Declaration of interest:** Nil.  **Nomination for awards:** Physiotherapy. |