

**ADD-ON TREPROSTINIL
THERAPY AND PAH**

Improving the well-being of patients with pulmonary arterial hypertension (PAH) remains difficult despite the availability of several treatment options from different therapeutic categories. A new multicenter randomized controlled trial indicates that inhaled treprostinil is a useful add-on therapy for patients treated with oral PAH-specific drugs.

The TRIUMPH trial included 235 patients with NYHA functional class III or IV PAH, whose 6 min walking distance (6MWD) was 200–450 m, and who were being treated with oral sildenafil or bosentan. Patients were randomly assigned to receive added inhaled treprostinil or placebo four times per day and were followed up for 12 weeks.

Patients who received treprostinil had a significant, placebo-corrected improvement in the 6MWD test results, both at week 6 and week 12 (median difference from baseline 19 m and 20 m, respectively). At week 12, this improvement was found to be sustained for at least 4 h after drug administration, which, according to the authors, is “the first such observation with a prostanoid given on an intermittent basis.” Quality of life, assessed with the Minnesota Living with Heart Failure questionnaire, was improved among patients receiving treprostinil compared with those receiving placebo. Analysis of adverse events and clinical tests showed that treprostinil was safe and well-tolerated. Treprostinil therapy was not, however, associated with changes in time to clinical worsening, functional class, Borg Dyspnea score, or PAH signs and symptoms.

The improvement in the 6MWD test seen with treprostinil therapy was more marked in patients receiving background bosentan than in those receiving background sildenafil. Further studies are needed to clarify the reasons for this difference. Trials with a longer follow-up and inclusion of patients with less-severe disease are also warranted.

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Original article McLaughlin, V.V. *et al.* Addition of inhaled treprostinil to oral therapy for pulmonary arterial hypertension: a randomized controlled clinical trial. *J. Am. Coll. Cardiol.* 55, 1915–1922 (2010)