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Lung alert

Sildenafil does not improve 6 min walk distance in advanced idiopathic pulmonary fibrosis

It has been postulated that sildenafil, a phosphodiesterase-5 inhibitor and pulmonary artery vasodilator, may improve gas exchange in advanced idiopathic pulmonary fibrosis by preferentially increasing perfusion to well-ventilated areas of lung. This double-blind randomised placebo controlled study was designed to investigate the effect of sildenafil on 6 min walk distance (6MWD) in patients with advanced idiopathic pulmonary fibrosis (carbon monoxide diffusing capacity <35% predicted value).

A total of 180 patients from 14 centres were randomised to sildenafil or placebo with reassessment of 6MWD at 12 weeks. Both groups received open-label sildenafil from weeks 12 to 24. There was no significant difference in the primary outcome measure between the two groups (the proportion of patients with improved 6MWD of ≥20%). Small significant improvements were seen in secondary outcome measures at 12 weeks in the sildenafil treatment group including carbon monoxide diffusing capacity, oxygen partial pressure, St George's respiratory questionnaire total score and SF-36 general health score. These improvements were not observed in the placebo group who subsequently received sildenafil.

The study failed to meet the primary outcome measure, however the authors suggest that improvements in secondary outcomes were of clinical significance. They accept that assessment of the relation between treatment effect and severity of pulmonary vascular disease would have been valuable. The authors conclude that the therapeutic efficacy of sildenafil in advanced idiopathic pulmonary fibrosis remains uncertain and that further trials are necessary.

► **Zisman D**, Schwarz M, Anstrom K, *et al*; the Idiopathic Pulmonary Fibrosis Clinical Research Network. A controlled trial of sildenafil in advanced idiopathic pulmonary fibrosis. *N Engl J Med* 2010;**363**:620–8.

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