

Treatment of Parkinson's disease with pergolide and relation to restrictive valvular heart disease

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Summary

Background Restrictive valvular heart disease has been reported in patients with Parkinson's disease treated with pergolide. However, few data are available on frequency, severity, dose dependency, and reversibility of pergolide-induced disease, nor on the pulmonary pressures of these patients. We aimed to clarify these characteristics in a large group of patients.

Methods 78 patients with Parkinson's disease treated with pergolide and 18 never treated with an ergot-derived dopamine agonist (controls) were evaluated by echocardiography. A valvular scoring system was used, ranging from 1 (proven ergot-like restrictive valvular heart disease) to 4 (no disease). For the mitral valve, tenting areas and tenting distances were measured. Systolic pulmonary artery pressures were derived from the tricuspid regurgitant jet.

Findings Restrictive valvular heart disease of any type was present in 26 (33%) patients in the pergolide group and none in controls ($p=0.0025$). Important disease (score 1 or 2) was present in 15 (19%) patients in the pergolide group and none in controls ($p=0.066$). Mean tenting distances and tenting areas of the mitral valve were 1.08 cm (range 0.55-2.66) and 2.39 cm² (0.88-4.59) in the restrictive mitral valve group versus 0.63 cm (0.22-1.20) and 1.39 cm² (0.39-3.23) in the non-restrictive group ($p=0.003$ and $p<0.0001$, respectively). Significant correlation was noted between cumulative doses of pergolide and tenting areas of the mitral valves ($r=0.412$, $p=0.017$). Mean systolic pulmonary artery pressures were 39.3 mm Hg (range 25-71) in the high-dose group versus 38.5 mm Hg (20-65) in the low-dose group ($p=0.76$) and 31 mm Hg (25-40) in controls ($p=0.02$ vs all patients given pergolide). In six patients, pergolide treatment was stopped because of restrictive valvular heart disease, in two of whom regression of disease was shown.

Interpretation Restrictive valvular heart disease is not a rare finding in patients treated with pergolide. Clinicians should consider changing to a non-ergot drug if this disease is diagnosed.

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