418 Clinically relevant valvular heart disease is rare in Parkinson’s disease patients treated with pergolide

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Background: Therapy with pergolide, an ergot-derived dopamine receptor agonist, is associated with retropitoneal, pleural and pericardial fibrosis. The aim of this study was to investigate the relationship between the long-term use of pergolide and the prevalence of restrictive valvular heart disease.

Methods: The study population consisted of 95 patients (age 61±9 years, 24% female) with Parkinson’s disease (PD) treated with pergolide and 35 healthy controls matched for age and gender. All subjects underwent transthoracic echo-Doppler examination. Valve morphology was graded as normal, restrictive or degenerative. Mitral valve tenting area and tenting distance were assessed on parasternal long axis views.

Results: Average daily dose of pergolide, cumulative dose and median duration of treatment were 2.93±0.72 mg, 4634±1932 mg and 51.6±23 months, respectively. Severe valvular heart disease or pulmonary hypertension was not observed in any subject. Two PD patients (2.1%) and one control (2.9%) had moderate degenerative aortic regurgitation. Discrete fibrous thickening of the left-sided valves was noted in 16 PD patients (16.8%) as compared to none of the controls (p<0.01). Mitral valve was affected in 10 patients and aortic valve in 6 patients. Regurgitation was not observed on any of the affected valves. Of note, in the PD patients, the mitral valve tenting area was significantly larger than in controls (1.44±0.03 cm² vs 1.05±0.05 cm², p=0.0001).

Conclusions: The present study demonstrated that long-term use of pergolide is not associated with clinically relevant valvular disease. Nevertheless, discrete fibrous changes with restrictive leaflet motion of left-sided valves were observed only in PD patients treated with pergolide.

419 Biological ring in mitral-valve repair: echocardiographic evaluation of mitral annulus dynamics and left-ventricular function with pericardial annuloplasty

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Objective: Annular dynamics play an important role in the valvular and ventricular function. We evaluate the effects of pericardial annuloplasty rings on mitral annulus dynamics and left-ventricular (LV) function after mitral-valve repair.

Material and methods: 100 consecutive patients were prospectively enrolled. All patients had myxomatous mitral valve with severe regurgitation and underwent identical surgical mitral-valve reconstruction. All patients underwent mitral annuloplasty with an autologous pericardial ring and other method of repair depends on involved segments. Post-operative LV systolic indices have been assessed by two-dimensional echocardiography at rest and during exercise. Mitral annular motion has been examined by mitral annulus systolic excursion (MASE). Mean peak trans-mitral flow velocities (TMFV) and mitral valve area (MVA) have been also evaluated by continuous-wave Doppler.

Results: The mean follow-up did not differ between the groups, those being 24±8 months in (range 12-35 months). Post-operative echocardiographic study did not show significant mitral regurgitation at rest or at peak exercise in any patient. There was significant increased in TMFV (from 1.14±0.20 to 1.68±0.22 m/s, t=4, p<0.001). Recruitment of LVEF reserve during exercise was observed (from 55.5±7 to 65.4±5%, t=-3.95, p<0.005). Significant increased MASE at all the studied longitudinal segments at rest and during exercise was observed in all patients. No calcifications have been observed on pericardial rings.

Conclusions: The autologous pericardium for annuloplasty in mitral valve has excellent mitral annulus dynamics and preserves LV function during stress conditions. Effective annular remodeling with the autologous pericardium is shown, with no echocardiographic sign of degeneration. Further studies are required to compare biological versus flexible prosthetic rings in mitral valve repair.