418 Clinically relevant valvular heart disease is rare in Parkinson’s disease patients treated with pergolide
H. Linkova 1; H. Penicka 1; E. Ruzicka 1; J. Roth 1; O. Ulmanova 1; L. Novakova 1; M. Havlikova 1
1Prague, Czech Republic

Background: Therapy with pergolide, an ergot-derived dopamine receptor agonist, is associated with retropertioneal, 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 from parasternal long-axis views. Mitral annulus systolic excursion (MASE) and mitral annulus dyskinesia and left-ventricular function with pericardial rings.

Results: Average daily dose of pergolide, cumulative dose and median duration of treatment were 2.93±0.72 mg, 4534±1932 mg and 51.6±22.3 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: echocardiography evaluation of mitral annulus dynamics and left-ventricular function with pericardial annuloplasty
F. Rodhanali 1; M.A. Yousefnia 1; M.H. Mandegar 1
1Day General Hospital, Tehran, Iran (Islamic Republic of)

Objective: Annular dynamics play an important role in the valvular andentricular 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 and 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 (range12-35 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<0.0001). Recruitment of LV EF reserve during exercise was observed (from 55.5±7 to 65.4±5%, t=3.95, p<0.0005). 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 remodelling 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.

420 Echocardiographic densitometry in the evaluation of aortic valve calcification
J. Nelassov 1; E. Moothi Pillay 2; A. Kastanajan 3
1Rostov-On-Don, Russian Federation; 2Rostov State Medical University, Ultrasound Dept., Rostov-On-Don, Russian Federation

Aim: In this study we aimed to analyze if echocardiographic densitometry can be useful for assessment of aortic valve calcification.

Methods: 27 subjects were examined by röntgenoscopy for the purpose of detection of aortic valve calcification. In 8 patients (mean age 69.9±8.7 years) calcific aortic valve disease was detected and in 19 subjects (mean age 36.0±14.1 years) - was not. Echocardiographic densitometry was performed using ultrasound scanner Nemio 35 (TOSHIBA). Standard cardiac program (1HeartA) and fundamental imaging frequency of 2.5 MHz were selected. Level of gain 80 was common for all subjects. Aortic valve was visualized in parasternal short axis view. Measurements were made with 2D-Echo Histogram package and method of ellipse was applied for tracing of aortic valve. The distribution of intensity of 2D-mode echoes within the traced area (aortic valve including aortic annulus) was displayed graphically. Obtained values of Max and Mean intensity in the 2 groups were compared using t-criteria of Student. Max is the number of data corresponding to the graduation value with the maximum number of data as a percentage of the total number of data (%). Mean is a mean value of echo intensity within the traced area. Results: Visualization of the aortic valve was performed in all cases easily. The Max value in subjects without calcification was 9.5±2.76 and in patients with aortic valve calcification - 6.13±0.83 (p=0.002) and the Mean value - 9.2±1.5 and 18.6±2.3 (p<0.0001), respectively.

Conclusion: Echocardiographic densitometry allows to differentiate between aortic valve calcification and normal valve and can give a quantitative evaluation of the degree of calcification.