CLINICAL OUTCOMES OF AORTIC VALVE REPAIR IN ASYMPTOMATIC PATIENTS WITH CHRONIC SEVERE AORTIC VALVE REGURGITATION

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Background

The aim of the study was to assess the clinical outcomes of aortic valve repair (AVR) in patients with chronic severe aortic insufficiency (AI) with emphasis in those without symptoms and good left ventricle function.

Methods

Between February 2003 and December 2013, 312 patients with chronic severe AI underwent AVR. We exclude patients with concomitant cardiac diseases and prospectively followed only 256 with pure AI. There were 124 (48.5%) asymptomatic patients. Causes of AI were anulo-aortic ectasia in 110 patients, aneurysm in 78, bicuspid in 52 and Marfan in 16. Correction of aortic leaflets prolapse was done by central cusp plication in 88 patients, by free edge reinforcement in 72 and by our approach "The chordae technique" in 96. The study endpoints were to assess the impact of AVR on freedom from cardiac-related deaths and cardiac or valve-related events. We evaluated the late outcomes according to the preoperative ejection fraction, to symptoms, and to LVESD/m2. The mean follow-up was 68±24 months.

Results

In-hospital death was 1.6%. Overall survival rate was 92.2%. Actuarial survival rate for asymptomatic and symptomatic patients were 96.7% and 86.9%, respectively (p<0.01). Ten-years survival rate in asymptomatic patients with LVEF>50% and with LVEF≤50% were 98.4% and 89.9%, respectively (p<0.05). No difference was observed in 10-years survival rate for patients with symptoms despite the value of LVEF% and for asymptomatic patients with LVEF≤50%. Asymptomatic patients with LVEDD/BSA<25mm/m2 have significantly better long term survival respect to those with LVEDD/BSA≥25mm/m2.

Baseline Characteristics	
Sex (Male)	184 (72)
Age (Mean±SD, years)	53±15
Hypertension	130 (51)
COPD	20 (7.8)
Diabetes	24 (9.4)
Creatinine > 1.5mg/dl	12 (4.7)
Atrial fibrillation	16 (6.2)
NYHA Class:	
II	48 (18.7)
III	52 (20.3)
IV	32 (12.5)
Asymptomatic patients	124 (48.5)
Mean LVEF%	46±15
Mean LVESD/BSA (mm/m2)	24±5
Mean LVEDD/BSA (mm/m2)	34±4
Aetiology of AI	
Anulo-aortic ectasia	110 (43)
Aneurysm	78 (30.5)
Bicuspid	52 (20.3)
Marfan	16 (6.25)
Functional classification of AI	
Type I	68 (26.5)
Type II	188 (73.5)
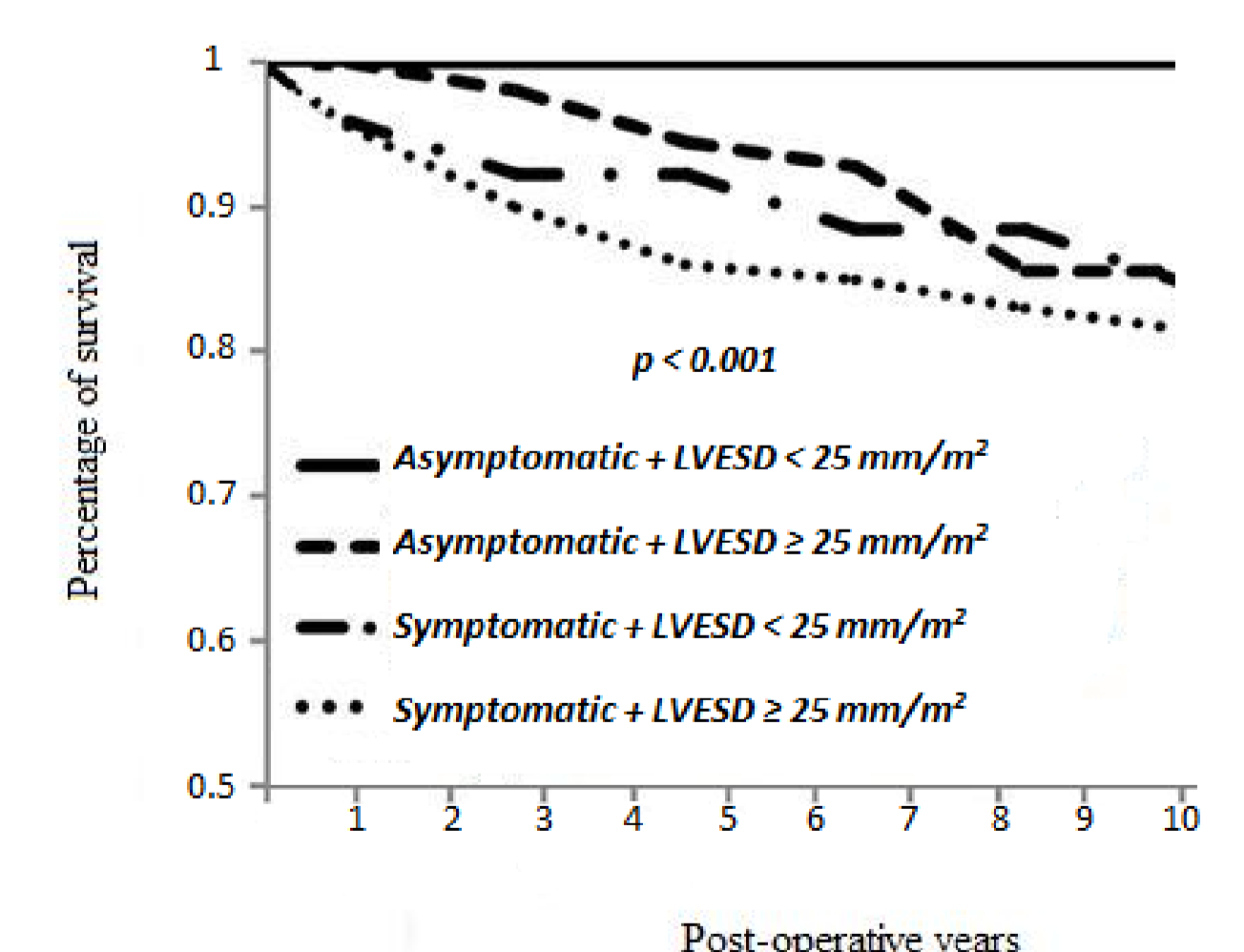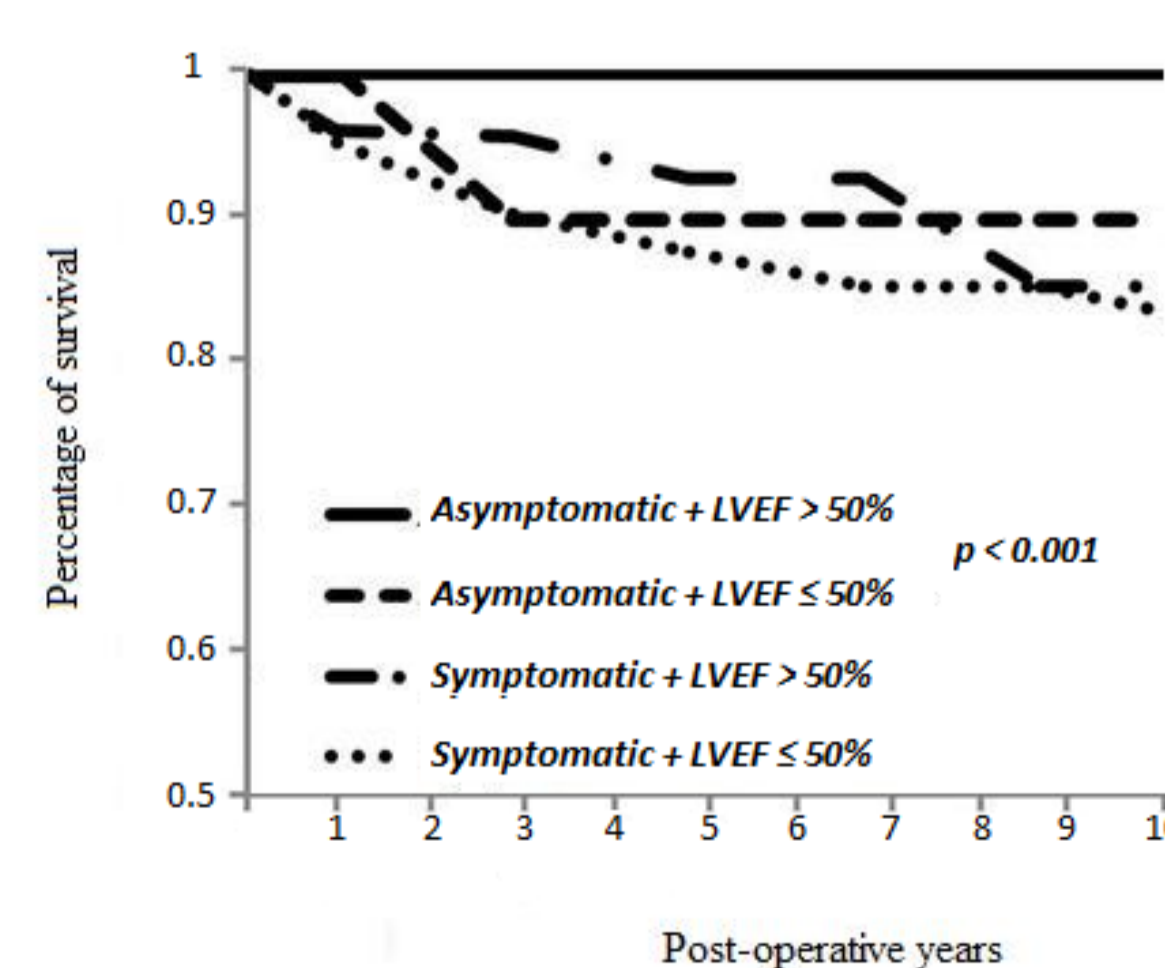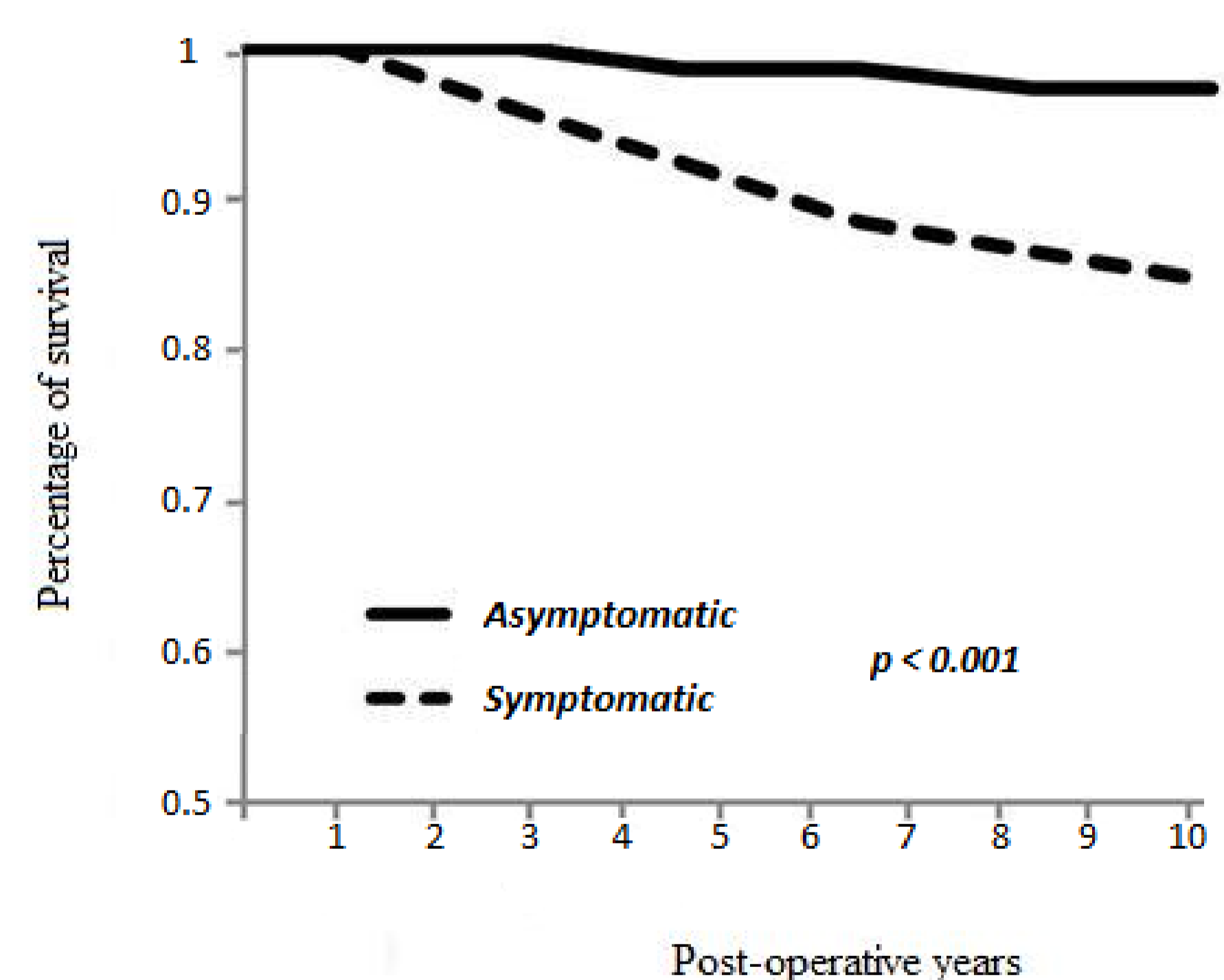
Conclusions

Postoperative outcome depends on preoperative symptoms and echocardiographyc data. Aortic valve repair appears to be a good surgical option and may be considered for early surgery in asymptomatic patients with normal ejection fraction and left ventricle size.