Abstract: P1809

Impact of mitral regurgitation on clinical outcome in patients with cardiac sarcoidosis

Authors:
Y Yoshikazu¹, H Kimura¹, H Noumi¹, H Tsuichiya¹, T Hasegawa¹, Y Yamamoto¹, T Yanagisawa¹, M Ogiwara¹, T Tachibana¹, M Horigome¹, Y Nouno¹, M Koshikawa², K Kuwahara², ¹Saku Central Hospital, Division of Cardiovascular Medicine - Saku - Japan, ²National Matsumoto Medical Center - Matsumoto - Japan,

Topic(s):
Infiltrative Myocardial Disease

Citation:

Backgrounds. Mitral regurgitation (MR) is sometimes observed in cardiac sarcoidosis (CS), and might be related to worsening heart failure. However, mechanism and clinical significance of MR associated with CS remains undetermined. Methods. We retrospectively analyzed consecutive 51 CS patients, and identified 16 patients with moderate to severe MR evaluated by quantitative echocardiography. According to the assessment of coaptation point and tenting height, main mechanisms of the 16 patients with MR were classified into prolapse (P) in 5, and tethering in 11 (T). Prednisolone was started from 30 mg/day, gradually tapered over a period of 6 months to a maintenance dose of 5 to 10 mg/day and continued a lifetime. Results. At the first visit, patients with MR showed higher incidence of NYHA class IV heart failure as compared to those without MR (56 vs. 9%, p<0.001). Abnormal uptake of fluorine-18 fluorodeoxyglucose in the papillary muscle was more frequent in patients with MR than those without MR (63% vs. 23%, p<0.05). Patients with tethering MR showed higher incidence of complete atrioventricular block (T: 74% vs. P: 40% vs. without MR: 31%, p<0.05), significantly reduced left ventricular (LV) ejection fraction (T: 33±7% vs. P: 52±9% vs. without MR: 52±16%, p<0.001) and increased LV end-diastolic volume index (T: 100±52ml/m2 vs. P: 66±23ml vs. without MR: 62±21ml, p<0.001). During the mean follow-up of 108 months, cardiac-event free survival was significantly worse in patients with tethering MR as compared to the other patients (log-rank;11.7, p<0.001). Six of the 11 patients with tethering MR received cardiac resynchronization therapy, and then did not experience further hospitalization due to decompensated heart failure for at least 2 years. Multivariate analysis identified tethering MR as an independent predictor of cardiac event (HR: 6.7, p<0.05). Conclusions. MR associated with CS has variety of mechanisms including prolapse, tethering and inflammation of the LV papillary muscle, and may be related to ventricular remodeling and poor clinical outcome.