



Imaging

PROGNOSTIC IMPLICATION OF THE MITRAL VALVE TENTING GEOMETRY IN PATIENTS WITH DILATED CARDIOMYOPATHY: TRANSTHORACIC REAL-TIME 3D ECHOCARDIOGRAPHIC STUDY

Poster Contributions

Poster Sessions, Expo North

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Authors: *Reiko Toida, Nozomi Watanabe, Kikuko Obase, Yuki Yoshimura, Hiroyuki Masuyama, Takashi Fukunaga, Tomoko Fukuda, Tetsunori Ishikawa, Kazuo Kitamura, Kiyoshi Yoshida, Department of Cardiology, Miyazaki Prefectural Miyazaki Hospital, Department of Cardiology, Kawasaki Medical School, Department of Internal Medicine, Circulatory and Body Fluid Regulation, University of Miyazaki, Miyazaki, Japan*

Background: Functional mitral regurgitation is a clinically important complication in LV dysfunction. We sought to evaluate whether 3D mitral valve (MV) tenting morphology by real-time 3D echocardiography (RT3DE) can predict long-term prognosis in dilated cardiomyopathy (DCM).

Methods: 44 DCM were examined by transthoracic RT3DE. 3D MV tenting morphology was reconstructed for the 3D quantitative analysis of the annulus, leaflet tenting and papillary position. We mapped maximum tenting site (TS) of the leaflet on the 3D images to observe the 3D tenting characteristics. We examined whether MV geometric parameters related to the long-term outcome.

Results: Follow-up(45±35month) information was collected in 40 patients. Cardiovascular events occurred in 22(55%), and there were 11 deaths(28%). Patients were divided into Event (n=22) and No-Event (n=18) groups. 3DEF, ESV, EDV were larger in Event group than No-Event group(P<0.001). Max TS were positioned mostly in the central region of the leaflet area(maxTS-cent) in No-Event group(94%). In contrast, max TS were mostly found in mid-posterior(maxTS-post) in Event group(77%), P<0.001. In maxTS-post, posterior leaflet angle were larger than maxTS-cent(P<0.001). Inter-papillary distance and angle were larger in maxTS-post than maxTS-cent(P=0.002).

Conclusions: Tenting pattern by RT3DE can predict long-term prognosis in DCM. DCM with maxTS in the posterior region had worse prognosis than those with maxTS in the central region.

