Double- chambered left ventricle and abnormal papillary muscle formation

Yassmin Hanfi
University of Paris 7, UK

Papillary muscles develop separately from mitral valve leaflet and chordae. Where papillary muscles origin from myocardial ridge of the anterior wall and to the posterior wall of the left ventricle, Chordae and mitral valve leaflets origin from a cushion tissue. The myocardial ridge gradually loosens from the ventricular wall and meanwhile the cushion tissue transforms into leaflet and chordae1. Abnormality in the development of papillary muscle could be responsible of a rare form of double chamber LV. The double chamber LV can be misdiagnosed as aneurysm or rupture LV. Identification of such form of double chamber LV would have an impact for the patient management care. Here is a case report of double chamber LV with variable presentation as previously published. Case report 17 years old male patient with a recent history of palpitation not related to exertion. Normal ECG findings. A transthoracic echocardiogram revealed mildly dilated left ventricle with abnormal trabeculated appearance and papillary muscle apparatus forming double chamber LV with mild obstruction. Cardiovascular magnetic resonance (CMR) cine images showed a well formed compacted myocardial layer with normal systolic thickening excluding the LV non compaction pathology. Although confirmed an anomalous muscular bridge opposite to the normally formed anterolateral (AL) papillary muscle causing partial division of the LV in two chambers without significant obstruction at rest (Panels A, B, D). Peak recorded velocity <1m/s by velocity mapping at rest (Panel E). While the posteromedial papillary muscle is abnormally hypoplastic and heavily fragmented (Panels G, H). The mitral valve found to be with mild bellowing of its anterior leaflet with no significant regurgitation. late gadolinium enhancement phase at the abnormally hypoplastic posteromedian papillary muscle.

e: yasmin.hanfi@gmail.com

Notes: