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Myocardial Crypts in a Duchenne Carrier; A Case Report

Sumaya Al Helali MD

Cardiologist, Saudi Arabia

Abstract

Myocardial Crypts have been reported in patients who are carriers of genetically-determined hypertrophic cardiomyopathy (HCM) and to less extent in patients with other cardiovascular patients. Duchenne muscular dystrophy (DMD) is an X-linked inherited myogenic disorder with frequent cardiac involvement, including left ventricular (LV) impairment, myocardial fibrosis, LV dilation, and eventually heart failure.

Case presentation: A 32-year-old female patient with a strong family history of DMD was presented at our center for cardiac assessment. The patient had a baby boy diagnosed with DMD at his second year and had a recent abortion of a fetus with a confirmed mutation of dystrophin gene in hemizygous state (deletion of exon 44). The patient had the sons of two of her sisters diagnosed with DMD and the both sister diagnosed with severe dilated cardiomyopathy (DCM) required implantable cardioverter defibrillator . Additionally, she had three male sibling died at early childhood with DMD . The patient was asymptomatic with normal echocardiogram, electrocardiogram (ECG), and holter monitor and normal cardiac enzyme . Cardiac magnetic resonance imaging (CMR) showed normal LV size, wall thickness, mass, and function (63% ejection fraction) without myocardial fibrosis by late gadolinium enhanced study. Cine image showed Mid and apical antero-septal myocardial crypts. They were deep blood filled invaginations penetrating more than 50% of the thickness of adjoining compact myocardium in diastole and totally obliterated during systole, perpendicular to the endocardial border

Discussion: This is probably the first case report showing myocardial crypts in a Duchenne carrier. Previously reported myocardial crypts were largely associated with (sarcomeric) genotype-positive phenotype-negative HCM. Myocardial crypts are believed to be one of the early pathological alterations in the myocardium of HCM carriers that ultimately progress into manifest HCM. Whether it could be considered as an early marker of Duchenne cardiac involvement precede the myocardial fibrosis or DCM , portend an unfavorable cardiac outcome or weather it a genotype related sign ; Still needs to be confirmed in longitudinal studies used CMR to exclude subclinical lmyocardial damage.

Biography:

I am cardiologist ; board certified of internal medicine and Board certified of Cardiology , Fellowship of cardiac MRI/CT from the university of Toront (2 years duration) , Mini fellowship from Duke uneversity 3 month duration .Head of cardiac MRI/CT in prince Sultan cardiac center . I did present my abstract in interenational confernce (London 2014 . Toronto2015. AbuThabi 2015)

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