



Dilated cardiomyopathy phenotype in a female patient with Danon disease

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KEYWORDS: dilated cardiomyopathy, Danon disease.

CITATION: *Cardiol Croat.* 2023;18(5-6):174. | <https://doi.org/10.15836/ccar2023.174>

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Background: Danon disease (DD) is a rare X-linked dominant cardioskeletal myopathy, caused by mutations in the Lysosome-Associated Membrane Protein-2 gene (LAMP-2). The X-linked inheritance causes differences in phenotypic severity between males and female¹. Classical clinical features in males include skeletal myopathy, mental retardation, and hypertrophic cardiomyopathy (HCM), while female carriers show a later onset of milder symptoms and an equal prevalence of dilated cardiomyopathy and HCM².

Case report: We report a case of a female patient who first presented in 2015 at the age of 26 years with a transient ischemic attack. Initial echocardiographic assessments revealed typical images of dilated cardiomyopathy with a mildly reduced left ventricular ejection fraction at 45%, a moderately dilated left ventricle (EDD 60 mm) with normal wall thickness (11 mm). Clinically she was NYHA 2 class, her ECG showed sinus rhythm and no paroxysms of atrial fibrillation could be verified, while coronary artery disease was ruled out. Guidelines directed medical therapy was started along with warfarin, and in 2017 a CRT-D was implanted. Over the course of years, her EFLV gradually deteriorated to 25% in 2019, while the dimensions of the left ventricle remained almost the same, with development of severe symptoms (NYHA 3). Genetic analysis, using targeted next generation sequencing, showed that the patient carried a LAMP2 missense variant, c.928G > A, confirming the DD. The patient was included to the heart transplantation waiting list, and in 2020 a successful heart transplantation was performed.

Conclusion: Although the DD is typically associated with HCM phenotype, the dilated cardiomyopathy phenotype is also prevalent in women, confirming phenotypic heterogeneity of DD, while genetic testing is essential for diagnosis.

RECEIVED:
March 26 2023

ACCEPTED:
March 29, 2023



LITERATURE

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