Danon disease with typical early-onset cardiomyopathy in a male: Focus on a novel LAMP-2 mutation

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Abstract: Bui YK, Renella P, Martinez-Agosto JA, Verity A, Madikians A, Alejos JC. Danon disease with typical early-onset cardiomyopathy in a male: Focus on a novel LAMP-2 mutation. Pediatr Transplantation 2008. © 2008 Blackwell Munksgaard Abstract: We report a case of a 16-yr-old male with Danon disease caused by a novel mutation in the LAMP-2 gene. Mutations in the LAMP-2 gene result in the absence of LAMP-2 on immunohistochemical staining of muscle tissue, thus defining Danon disease, a rare X-linked myopathy. It is characterized clinically by HCM or left ventricular hypertrophy, a WPW pattern on ECG, variable degrees of muscular weakness (skeletal myopathy), mental retardation, and retinal changes. The patient presented with severe skeletal muscular weakness and respiratory failure. He also had a history of two OHTs, the first one for severe HCM and the second for allograft rejection. The patient's myopathy was initially presumed to be exclusively related to steroid-induced "critical care myopathy." However, further evaluation with a thigh muscle biopsy revealed autophagic vacuoles with sarcolemmal features suggestive of a lysosomal storage disorder. DNA analysis ultimately identified a previously unreported hemizygous IVS6+3_+6delGAGT splice site deletion mutation in the LAMP-2 gene located within the 5′ splice site of intron 6, consistent with Danon disease.

Keywords: cardiomyopathy; myopathy; lysosomal storage disease; orthotopic heart transplantation

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