Cardiac amyloidosis: From clinical suspicion to diagnosis

Neiva Rosane Maciel
Argerich Hospital, Argentina

Problem statement: Cardiac amyloidosis is a disease caused by amyloid deposits at the cardiac level and may be multisystemic. There are more than 30 types of amyloid, 9 of which can affect the heart. There are three main types of cardiac amyloidosis: AL, ATTRwt, or ATTRh. Since cardiac compromise is what determines the prognosis, it is important to make a correct diagnosis and typing, since treatment and prognosis are different for each subtype. The diagnosis can be invasive or non-invasive. Multi-images play an important role, but not all of them make it possible to avoid endomyocardial biopsy. Two clinical cases are presented with different forms of presentation and diagnostic management.

Clinical cases: Patient 1: 87-year-old male, hypertensive and medicated, osteomuscular, compromise, neurosensory and orthostatism. Echocardiogram: SIV: 14 mm, PP: 19 mm and FEY 63%. Electrocardiogram: pseudo infarct pattern and low voltage. Bone scintigraphy: Perugini grade 3 cardiac uptake, Dosage of light chains in blood and urine by immunofixation and negative Kappa/Lambda ratio. Genetic study ruled out alteration of the TTR gene. New Echocardiogram: Longitudinal Strain of -10, SIV 16 mm, PP 11 mm and Fey 43%. It is interpreted as ATTRwt type amyloidosis and treatment is started. Patient 2: 76 years old, hypertensive, FAC, Fey: 48%, Electrocardiogram pseudoinfarction pattern, IVS 13 mm and Bone scintigraphy uptake Peruginni grade 1 and H/CL ratio 1.2 [Figure 1]. In this case, it must first be ensured that the uptake is from the myocardial walls and not the blood pool and prevent pitt falls. Tissue biopsy cardiac or extracardiac is required for correct diagnosis and treatment.

Figure 1. Bone scintigraphy with PVP-Tc 99 m (3 hs). Perugini score: Grade 1, H/CL Ratio: 1.2.

Conclusion: The diagnosis of cardiac amylodosis requires high clinical suspicion. Multi-imaging studies are required and the bone scintigraphy with phosphonates allows an early diagnosis and in the absence of blood dyscrasia allows avoiding the endomyocardial biopsy.

Biography

Neiva Maciel is a physician with experience clinical cardiology and cardiovascular imaging. She has built her career based on clinical care, cardiovascular study reporting, research and teaching at the “Hospital de Agudos Dr. Cosme Argerich”, where she is Staff of Nuclear Medicine department. She participates in the Argentine Society of Cardiology (SAC) as an active member of the Nuclear Cardiology Council; she has worked as scientific secretary for three years and elected director of the Nuclear Cardiology Council for 2023. She is part of the Scientific Committee of SAC Congress. She is Staff of “Hospital de Agudos Dr. Cosme Argerich”.

Received: November 29, 2022; **Accepted**: December 1, 2022; **Published**: March 27, 2023