Secondary hemochromatosis

Hemocromatosis secundaria

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The case of a 48-year-old man with a four-year history of myelodysplastic syndrome and multiple transfusions due to anemia, who arrived at the emergency department with a six-week history of symptoms of heart failure, is presented. Laboratory tests showed high-sensitivity troponin I levels at 67 ng/mL, B-type natriuretic peptide at 2,386 pg/mL and serum ferritin at 4,412 ng/mL. Transthoracic echocardiogram showed dilation of all four cavities with right predominance (Fig. 1A). New echocardiography techniques such as ventricular mechanics with speckle tracking confirmed dilated cardiomyopathy at advanced stage with severe mechanical dysfunction and longitudinal strain of -10% (Fig. 1B), circumferential strain of 7.7% and radial strain of 16%; interestingly, there was a -7° negative twist (Fig. 1C) caused by basal and apical rotation direction reversal. Cardiac magnetic resonance showed dilation and severe biventricular dysfunction, with left ventricular ejection fraction of 22% and right of 27%. Iron

infiltration-induced cardiomyopathy was suspected due to patient history, and cardiac magnetic resonance with T2*-weighted sequence was therefore performed, which confirmed moderate cardiac iron infiltration with a value of 17 ms and a T2*-weighted liver value of 27 ms (Fig. 1D). Short axis late gadolinium enhancement showed diffuse fibrosis of epicardial predominance (Fig. 1E). These findings are characteristic of the iron overload (hemochromatosis) infiltrative cardiomyopathy dilated phenotype at advanced stages of the disease.

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Conflicts of interest

The authors declare that they have no conflicts of interest.

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Figure 1. **A:** Transthoracic echocardiogram: four-chamber apical view. **B:** Polar map showing global longitudinal strain decrease. **C:** Twist inversion (white line) with negative value (-7°). **D:** T2*-weighted cardiac magnetic resonance sequence on the short axis at the base level confirming iron infiltrative cardiomyopathy. **E:** Late gadolinium enhancement at the short axis level showing predominantly epicardial fibrosis (red arrows).

Ethical disclosures

Protection of human and animal subjects. The authors declare that no experiments have been performed on humans or animals for this investigation

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