A frozen heart

Laurent Davin*, Victor Legrand, and Delphine Legrand

Department of Cardiology, University Hospital Liège Belgium, Domaine du Sart Tilman B35, Liège 4000, Belgium

* Corresponding author. Tel: +32 43 667 192, Fax: +32 43 667 627, Email: laurentdavin@yahoo.fr

An 81-year-old woman was found unconscious on a walking path. The patient had severe hypothermia (central body temperature: 30°C). She was known to be insulin-dependent diabetic for many years and recently developed signs of dementia. Biological chemistry at admission revealed hyperglycaemia, metabolic acidosis, and marked CK elevation of muscular origin (CK: 19,530 UI/L, CKMB: 243 UI/L). Electrocardiogram was noteworthy, showing typical Osborn J wave as seen in severe hypothermia (Panel A). Echocardiography showed anteroapical akinesia, and the patient was scheduled for angiography to rule out coronary artery disease. Coronary angiogram revealed nearly normal coronary arteries. Left ventriculography showed a typical Tako-Tsubo pattern (Panels B, C). Cardiac MRI, performed 12 h later, still confirmed wall motion abnormalities but failed to demonstrate any contrast delayed enhancement, ruling out an ischaemic insult (Panel D).

Following correction of the hypothermia, hyperglycaemia, and hydration, she completely recovered without sequelae. Electrocardiographic alterations disappeared and left ventricular wall motion, as assessed by echocardiography and MRI, returned to normal.

Our case illustrates an unusual presentation of apical ballooning syndrome in the setting of severe hypothermia.