A 68-year-old man was admitted to our hospital with dyspnoea and atypical chest pain.

He had no risk factors for coronary artery disease (CAD) except for mild obesity (BMI: 25.1) and his clinical history was noteworthy for heavy alcohol consumption (≏4 L of beer/day in the last 10 years).

No alterations were present at blood exams and basal/stress-ECG but a transthoracic echocardiography performed at admission revealed a globally reduced biventricular systolic function.

Cardiac CT excluded the presence of underlying CAD; however, curvilinear hypodense meso-epicardial stripes were depicted within the left ventricular (LV) lateral wall, characterized by a fat-like mean attenuation value of -80 HU (Panels A and B).

Cardiac magnetic resonance confirmed a predominant subepicardial fatty deposition exclusively located within the LV lateral wall (Panel C), with combined homogenous late enhancement located within the same segments showing a typical ‘non-ischaemic’ pattern of distribution with subendocardial layer sparing (Panel D). Increased interventricular septal thickness was noted (18 mm), together with a mild thickening of the LV lateral wall (13 mm). LV functional analysis demonstrated hypo-dyskinesia of the lateral wall and reduced ejection fraction (41%; Supplementary data online, Video S1), with preserved volumes.

Symptoms gradually disappeared within 1 week after admission and patient signed for discharge refusing any pharmacological treatment.

Heavy alcohol consumption has shown to be associated in rare cases to lipomatous myocardial metaplasia without significant arrhythmias; however, the underlying pathological mechanisms are still poorly understood. CT and MR imaging allows its non-invasive recognition avoiding further invasive procedures.

Supplementary data are available at European Heart Journal — Cardiovascular Imaging online.