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Left Ventricular Noncompaction: Cardiovascular Magnetic Resonance and Echocardiographic Imaging of a Rare Isolated Midseptal Form

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Figure 1. The echocardiography showed that all chambers are normal in size and function. Left ventricular function was not impaired, with an ejection fraction of 76%. A LVNC limited to the central septum was seen (Arrow), without any other structure abnormalities. (LV: Left ventricle; LA: Left atrium; RA: Right atrium).

Left ventricular noncompaction (LVNC) is a rare congenital disorder characterized by the presence of an extensive noncompacted myocardial layer lining the cavity of the left ventricle (LV) and can potentially lead to cardiac failure, thromboembolism and malignant arrhythmias.

We report on a 44-year-old female patient admitted to our institution for evaluation of a suspected tumour in the interventricular septum, who complained of short recurrent tachyarrhythmias. Laboratory test, ECG, Holter-ECG and exercise test were normal.

Echocardiography and cardiovascular magnetic resonance imaging confirmed the diagnosis of LVNC confined to the middle inferoseptal segment—a very atypical distribution (Fig. 1) (Peterson et al. (2005)).

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Reference

1. Peterson SC, Selvanayagam JE, Wiesmann F, Robson MD, Francis JM, et al.: Left ventricular non-compaction: insights from cardiovascular magnetic resonance imaging. *JACC*. 2005;46: 101–105.

Figure 2. A cardiovascular magnetic resonance imaging was carried out and confirmed the diagnosis. In the interventricular septum, which had a thickness of 9 mm, a loosened-up structure of the myocardium was detected (dotted arrow), located midventricular and inferoseptal. The axial extension was 26×12 mm. The middle septum appeared hypokinetic, and the noncompacted area measured 22 mm along the heart axis. (LV: Left ventricle; RV: Right ventricle).