

Images in...

## 320-slice CT and myocardial bridge

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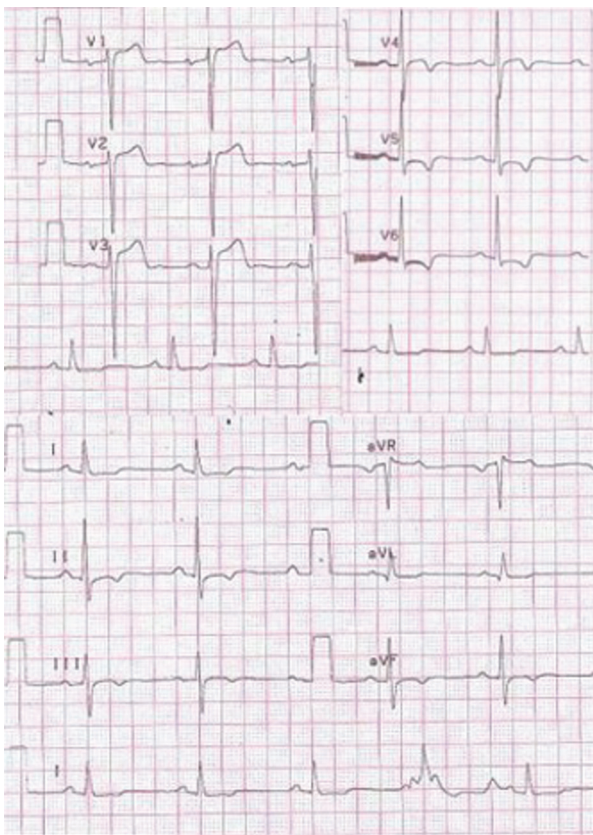
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### DESCRIPTION

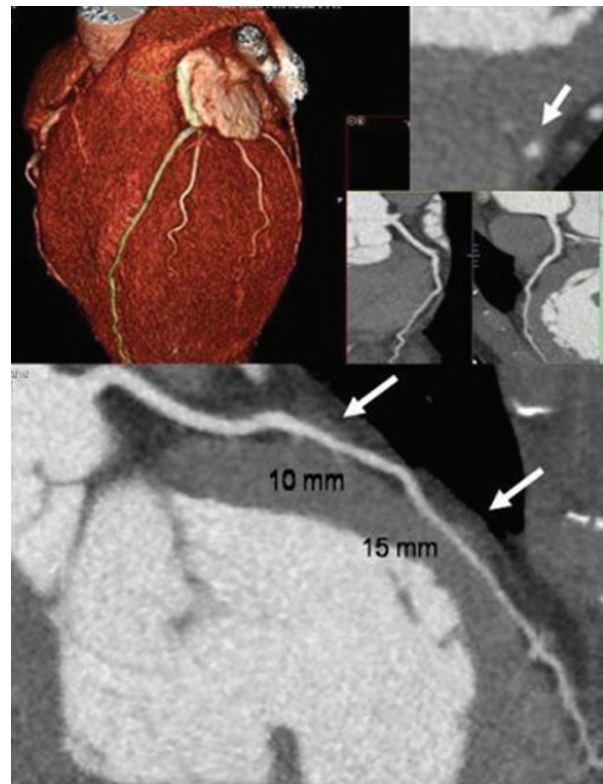
A 29-year-old professional athlete was referred for cardiac evaluation after a syncope occurring during strenuous exercise. Twelve-lead ECG showed Brugada-like pattern (figure 1), but both flecainide and genetic tests were negative. ECG Holter and echocardiogram were normal. ECG stress test showed no significant ST-segment changes. In order to rule out coronary artery disease or anomalies, 320-slice multi detector CT (Aquilion One; Toshiba Medical Systems Inc, Tokyo, Japan) was done with settings at 100 mV and 320 mA (heart rate was 50 beats/min). Eighty millilitre of contrast agent (Ultravist 370; Bayer Schering Pharma AG, Berlin, Germany) were injected intravenously at a rate of 5.5 ml/s, followed by 60 ml of saline at the same rate. The total radiation dose

was only 2.4 mSv. The scan showed two typical myocardial bridges of the left anterior descending artery, with intramural tracts of 10 mm in the mid-segment and of 15 mm in the distal segment (figure 2, upper and lower panels). No evidence of stenosis of coronary arteries was found.

CT can rule out coronary artery disease in very low-risk subjects and detect myocardial bridging.<sup>1</sup> With the introduction of 320-slice multi-slice CT, scanning of the entire heart has become possible in a single heart beat with a very low dose of radiation.<sup>2</sup> Thus, this novel technique is particularly suited for cases (ie, such as young professional athletes) in whom is essential to rule out any possible coronary artery disease or anomaly avoiding more invasive procedures.



**Figure 1** Twelve-lead ECG showing Brugada-like pattern.



**Figure 2** The 320-slice scans showed two typical myocardial bridges of the left anterior descending artery, with intramural tracts of 10 mm in the mid-segment and of 15 mm in the distal segment (arrows).

**Competing interests** None.

**Patient consent** Obtained.

## REFERENCES

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2. **de Graaf FR**, Schuijff JD, Delgado V, *et al*. Clinical application of CT coronary angiography: state of the art. *Heart Lung Circ* 2010;**19**:107–16.

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