Persistent bi-coronary Thebesian veins to the left ventricle

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Abstract In this image case we describe a relatively rare vascular malformation known of as Thebesian veins, which in some cases could cause cardiac ischemia and ventricular arrhythmias.

Keywords Thebesian veins · Ischemia · Ventricular tachycardia

A 76-year-old female suffered a nearly fatal car crash. As subsequent Holter registration revealed occurrence of ventricular tachycardias, coronary angiography was performed. Remarkably, contrast liquid from both

coronary arteries opacified the left ventricular cavity (Fig. 1).

In contrast to coronary-ventricular fistulae, Thebesian veins form a diffuse vascular network draining coronary blood into the cardiac lumen, and are found in approximately 0.2 % of patients undergoing coronary angiography [1]. In 5 % of these patients, both coronary arteries are involved. Drainage solely into the left ventricle is seen in only 3 % of cases [1].

Myocardial ischaemia due to relative blood steal by Thebesian veins has been described previously [2], and might cause ventricular arrhythmias. As SPECT imaging did not reveal ischaemia in this patient, ventricular tachycardias were assigned to a previous, symptomatic, inferolateral infarction.

Fig. 1 Thebesian veins from the left and right coronary artery draining blood into the left ventricular cavity. rca, right coronary artery; pl, posterolateral branch; rdp, ramus descendens posterior; lca left coronary artery; lad, left anterior descending; rcx ramus circumflexus; mo, margo obtusus

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