Successful radiofrequency catheter ablation of two distinct ventricular tachycardias in a patient with three idiopathic left ventricular saccular aneurysms

Left ventricular (LV) aneurysms of unknown etiology are defined as idiopathic; most of them are asymptomatic and often occasionally found during diagnostic procedures.

A 45-year-old man with no previous history of disease was taken to electrophysiology (EP) laboratory for the ablation of wide QRS tachycardia with a heart rate of 205 bpm, with RBBB morphology and inferior axis. Coronary angiography was normal. Left ventriculography revealed three secular aneurysms, two on the basal and mid portions of the anterior wall and one on the mid-inferior wall (Video 1). A wide QRS tachycardia consistent with the clinically documented tachycardia was induced in the EP lab. Activation mapping with CARTO 3 (Biosense-Webster) showed that the tachycardia originated from the LV anterior wall close to the base of the saccular aneurysm located at the anterobasal region (Fig. 1). After numerous cooled-tip RF applications at this site, the tachycardia morphology changed to one with a superior axis and a different cycle length (Fig. 2A). The second tachycardia was seen to originate from the base of the other, inferiorly located saccular aneurysm (Fig. 1). Six RF applications to this region terminated the tachycardia permanently (Fig. 2B).

To the best of our knowledge, this case report is the first to describe successful ablation of two different forms of ventricular tachycardia originating from two among three different idiopathic left ventricular aneurysms.

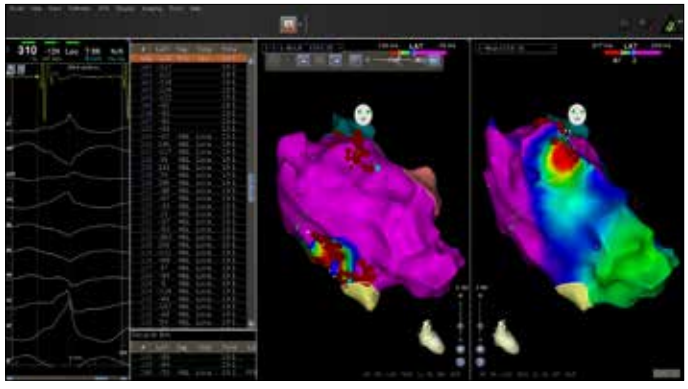

Figure 1. Two distinct ventricular tachycardias arising from the base of the anterobasal (right side) and inferiorly located (left side) saccular aneurysms

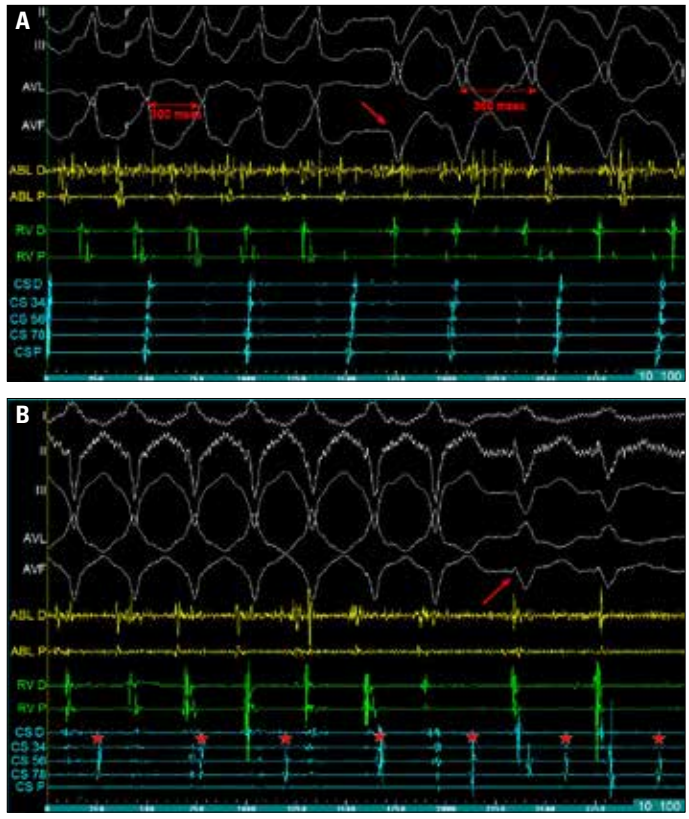

Figure 2. (A) The ventricular tachycardia morphology changed to one with a superior axis and a different cycle length which was confirmed by 3-D mapping system arising from the inferiorly located saccular aneurysm. (B) Radiofrequency energy application to the base of the inferiorly located saccular aneurysm terminated the tachycardia (red-colored asterisks indicated the sinus beats)

Basri Amasyalı, Ersel Onrat[1]
Department of Cardiology, Faculty of Medicine, Dumlupınar University; Kütahya-*Turkey*
[1]Department of Cardiology, Faculty of Medicine, Kocatepe University; Afyon-*Turkey*

Video 1. RAO view of contrast ventriculography showing 3 distinct left ventricular saccular aneurysms.

Address for Correspondence: Dr. Basri Amasyalı,
Dumlupınar Üniversitesi Tıp Fakültesi, Kardiyoloji Anabilim Dalı, 43000, Kütahya-*Türkiye*
Phone: +90 274 265 20 31
Fax: +90 274 265 20 16
E-mail: dramasyali@yahoo.com
Available Online Date: 25.06.2014

DOI:10.5152/akd.2014.5575