

Giant right atrial thrombi associated with permanent hemodialysis catheter in a young patient: 3-dimensional echocardiography views

Genç hastada kalıcı hemodiyaliz kateterine bağlı dev sağ atriyal trombus: 3- boyutlu ekokardiyografi görüntüleri

Thrombosis is a possible complication of central venous catheters utilized for hemodialysis. We report the case of a 25-year-old man with a previous chronic vascular hemodialysis catheter who was referred for routine echocardiogram due to persistent fever. The rest of the physical examination was unremarkable. Electrocardiography showed normal sinus rhythm. We demonstrated the presence of a 37x36 mm rounded mass and pending of the free wall of the right atrium with normal ejection fraction [Video 1, Fig. 1 (2D images), Video 2, Fig. 2 (3-dimensional echocardiography images)]. See corresponding video/movie images at www.anakarder.com]. Transesophageal study confirmed the giant



Figure 1. Two-dimensional echocardiography image of a giant and round thrombi in the right atrium



Figure 2. Three-dimensional echocardiography image of a rounded and giant mass in the right atrium

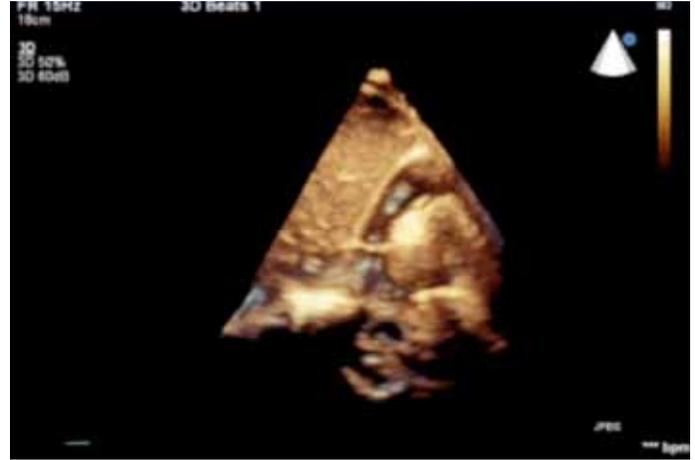


Figure 3. Three-dimensional echocardiography image of a point of the mass attachment at the right atrial free wall

mass with moderate pericardial effusion. The discovery of an atrial mass obliges the clinician to perform a differential diagnosis including tumor and thrombus and its assessment presents important clinical implications. In this case, definite diagnosis of the nature of an intracardiac mass was difficult by echocardiography due to the patient's unique clinical setting and echocardiographic characteristics of the mass. Therapeutic strategy in this case must be balanced between risk of embolism and risks due to the surgical procedure. A mass excision was performed due to risk of thromboembolism and mimicking tumors. Histology revealed calcified thrombus. In this patient, the most likely cause of right thrombi formation was endothelial damage due to hemodialysis catheter and tendency of thrombosis due to renal failure. Catheter-induced thrombosis is usually attached to the catheter. In our patient, the mass was not attached to the catheter and point of attachment was at the right atrial free wall [Video 3 (2D echocardiography images), Video 4, Fig. 3 (3D echocardiography images)]. See corresponding video/movie images at www.anakarder.com]. In conclusion, we suggest performing routine transthoracic echocardiography in case of having a hemodialysis catheter to avoid further lethal complications.

Video 1: Two-dimensional echocardiography image of a giant and round thrombi in the right atrium

Video 2: Three-dimensional echocardiography image of a rounded and giant mass in the right atrium

Video 3: Two-dimensional echocardiography image indicates right atrial thrombi pending of the right atrial free wall

Video 4: Three-dimensional echocardiography image of a point of the mass attachment at the right atrial free wall

Fahrettin Öz, Yaşar Çizgici, Zehra Buğra
Department of Cardiology, İstanbul Faculty of Medicine, İstanbul University, İstanbul-Turkey

Address for Correspondence/Yazışma Adresi: Dr. Fahrettin Öz,
İstanbul Üniversitesi İstanbul Tıp Fakültesi, Kardiyoloji Anabilim Dalı, 34030,
İstanbul-Türkiye
Phone: +90 212 414 20 00 Fax: +90 212 414 20 00
E-mail: fahrettin_oz@hotmail.com

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