

Cardiogenic shock caused by huge para-aortic hematoma and pseudoaneurysm after Bentall operation

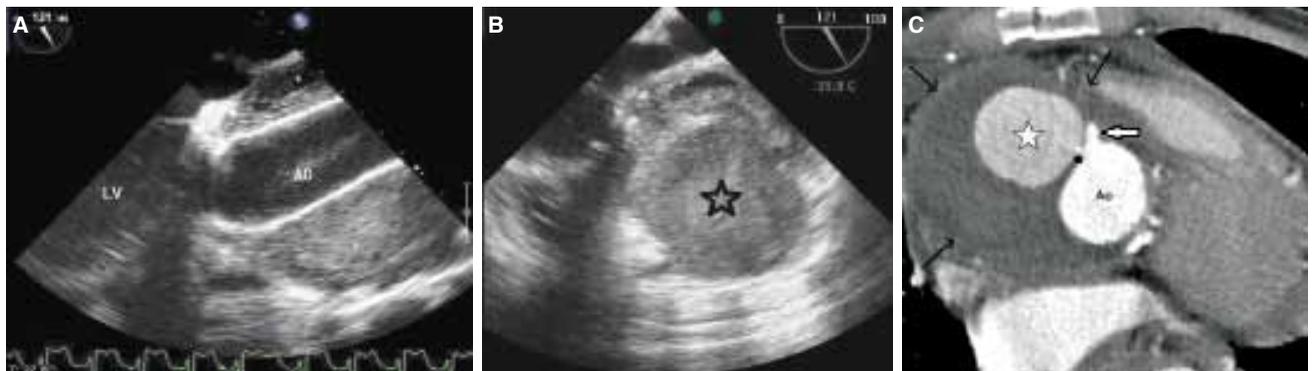
Bentall ameliyatı sonrası kardiyojenik şoka neden olan dev para-aortik hematoma ve psödoanevrizma

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Para-aortic hematoma due to leaking aortic conduit is an uncommon complication after Bentall operation. Especially in the early postoperative period, patients may have very subtle or no symptoms. Compression of the coronary arteries and ascending aorta by the hematoma may compromise myocardial vascularization, causing clinical signs of ischemic heart disease and heart failure. In this setting, our case emphasizes that early noninvasive evaluation may provide early detection of that complication. A 21-year-old male patient was referred to our department with a possible diagnosis of cardiogenic shock. Bentall operation had been performed one month before in another hospital because of an ascending aortic aneurysm and aortic valve insufficiency. His systolic blood pressure was lower than 80 mmHg. The physical examination revealed altered mental status,

weak peripheral pulse, cool skin, and the metallic sound of the heart valve. ECG was normal except for sinus tachycardia. Transthoracic and transesophageal echocardiography revealed decreased left ventricular function, normally functioning metallic valve in the aortic position, and huge para-aortic hematoma (Figure A). Additionally, this hematoma was seen to cause moderate aortic graft compression (Video 1*). Detailed examination showed blood flow through the junction between the aortic graft and right coronary ostium, and this flow caused a whirlpool-like echo-contrast in a large pseudoaneurysm (Figure B, Videos 2, 3*). Computed tomographic angiography showed the leakage of contrast material from the right coronary artery anastomosis into the pseudoaneurysm (37x38x40 mm) and a huge para-aortic hematoma (92x106x120 mm) (Figure C). Cardiothoracic surgery was consulted, and the patient was taken to the operating room. An exploratory thoracotomy was performed together with hematoma evacuation. Unfortunately, he died due to severe hemorrhagic stroke within the first postoperative week.



Figures– (A) Transesophageal echocardiography (TEE) showed a large para-aortic hematoma. Ao: Ascending aorta; Asterisk: Para-aortic hematoma; LV: Left ventricle. **(B)** Spontaneous echo contrast within the large pseudoaneurysm (star) was seen in the upper esophageal TEE view. **(C)** Computed tomographic evaluation. Ao: Ascending aortic graft; White star: Pseudoaneurysm; Arrows: Para-aortic hematoma; White arrow: Proximal part of right coronary artery; Black star: Leakage of contrast from the right coronary artery anastomosis. *Supplementary video files associated with this presentation can be found in the online version of the journal.