Aortic regurgitation is caused by aortic valve pathologies or aortic root diseases. Common causes of aortic regurgitation are a bicuspid aortic valve, and calcific and rheumatic aortic valve disease. Aortic valve prolapse is defined as displacement of the aortic valve structures downstream of a line connecting the attachment points of the valvula. The incidence of aortic valve prolapse is about 1%. It is more common in women, and in patients with a bicuspid aortic valve. Nearly 30% of patients with aortic valve prolapse have a bicuspid aortic valve. Non-bicuspid aortic valve prolapse is mostly seen with concomitant mitral valve prolapse. However, to our knowledge, isolated severe aortic regurgitation due to aortic valve prolapse in the absence of mitral valve prolapse or a bicuspid aortic valve has not been reported.

A 28-year-old male patient was admitted to our clinic with complaints of shortness of breath and palpitations. There was no history of rheumatic fever, trauma and valvular heart disease. In addition, he did not have a Marfanoid phenotype. The ascending aorta was of normal width. On physical examination, a 3/6 grade diastolic murmur was detected on the aortic focus. Arterial blood pressure was 120/50 mmHg. An electrocardiogram revealed normal sinus rhythm with a heart rate of 90/min. Transthoracic echocardiography demonstrated isolated severe aortic regurgitation and a normal mitral valve with no evidence of mitral valve prolapse (Figure A, Video 1*). Transesophageal echocardiography was planned to better assess the valve structures. A tricuspid aortic valve with prolapse of the right coronary leaflet and severe aortic regurgitation (Figure B, Video 2-3-4*) was detected and the patient was referred to surgery.