

Atrial fibrillation due to right atrial compression in a patient with pectus excavatum

Kunduracı göğsü olan hastada sağ atriyum basısına bağlı atriyum fibrilasyonu

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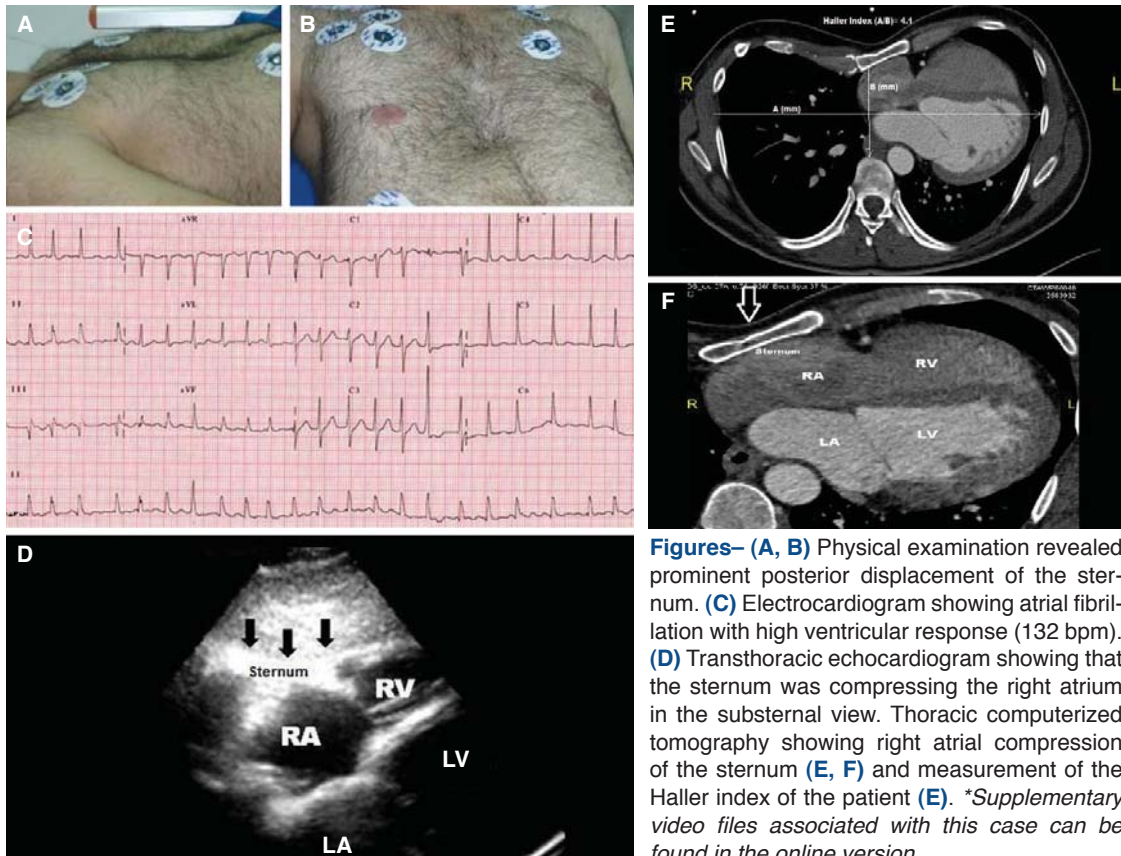
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A 31-year-old male patient was admitted to our emergency department with complaints of exertional dyspnea and palpitation ongoing for two months. He had no remarkable prior medical history and no history of cigarette smoking or drinking alcohol.

On admission, his physical examination revealed a blood pressure of 120/70 mmHg, a pulse of 130 bpm, and a depressed sternum with posterior displacement of the chest wall (Figs. A, B). An electrocardiogram showed atrial fibrillation (AF) with high ventricular response (ventricular rate of 132 bpm) (Fig. C). Transthoracic echocardiography demonstrated normal left and right ventricular systolic and diastolic functions, while the sternum was com-

pressing the right atrium without collapse (Fig. D). Thoracic computerized tomography confirmed the diagnosis of pectus excavatum as well as compression of the sternum to the right atrium (Figs. E, F). The severity of pectus excavatum can be calculated by the Haller index, which is derived by dividing the transverse diameter of the chest by the anteroposterior diameter, which is measured by computerized tomography scanning or chest radiography. The Haller index of our patient was 4.1, which is consistent with a severe stage of disease (Fig. E). Due to right heart chamber compression, other symptoms, and the Haller index, the patient was referred for surgical correction of the deformity. Operative repair was performed with no complication. The patient was asymptomatic and in sinus rhythm at his 6 and 12 month visits. Although there was no AF episode after correction of the mechanical defect, the patient should continue to be monitored due to the probability of lone AF.



Figures– (A, B) Physical examination revealed prominent posterior displacement of the sternum. **(C)** Electrocardiogram showing atrial fibrillation with high ventricular response (132 bpm). **(D)** Transthoracic echocardiogram showing that the sternum was compressing the right atrium in the substernal view. Thoracic computerized tomography showing right atrial compression of the sternum **(E, F)** and measurement of the Haller index of the patient **(E)**. *Supplementary video files associated with this case can be found in the online version.