

A rare case of isolated complete congenital sternal cleft



Nadir bir izole komplet konjenital sternal kleft olgusu

A 20-year-old male soldier presented to our clinic with complaints of dyspnea on exertion, pain and clash at the upper part of the sternum while he was carrying a heavy object for 4 years. His past medical history was unremarkable. He was non-smoker and working at furniture store. There were no intermarriage and inherited diseases in his family. On his physical examination, vital signs were in normal limits. On respiratory system examination, a wide gap at the upper part of the sternum was observed. Pulsations of the heart could easily be seen through the sternal abnormality. Bulging was seen clearly between sternal parts throughout the defect while patient was coughing. There was no abnormal lung and heart sounds on auscultation. Abdominal raphe was present between umbilicus and lower part of the sternum (Fig.1, Video 1. See corresponding video/movie images at www.anakarder.com). Other system examinations were unremarkable. Laboratory examinations were within the normal limits. Chest X-ray and thorax computed tomography (CT) showed complete fusion defect with a 4 cm in diameter of upper 2/3 and lesser than 1 cm in diameter of lower 1/3 of the sternal part of anterior chest wall (Fig. 2). Pulmonary function test was in normal limits. Echocardiography, abdominal ultrasonography and cranial CT did not reveal any coexisting abnormalities. Patient was diagnosed as an 'isolated complete congenital sternal cleft' and was referred to a superior center for surgical repair of the defect.

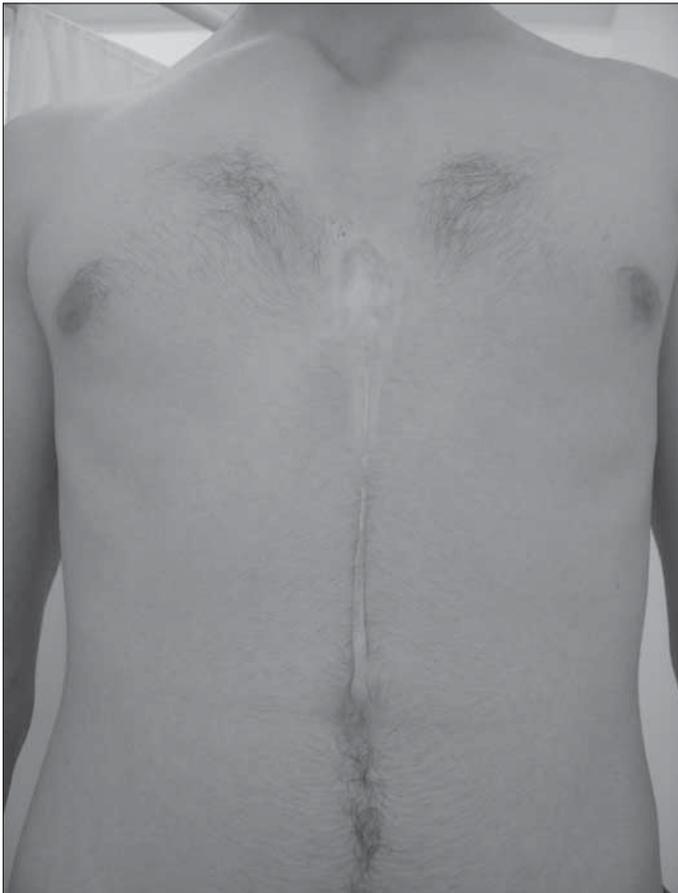


Figure 1. Sternal cleft and abdominal raphe



Figure 2. Three-dimensional thorax computed tomography image of a complete fusion defect of the sternum

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Impending thrombus through a patent foramen ovale complicated by pulmonary embolism: successful treatment with thrombolytic application



Pulmoner emboli ile komplike olan patent foramen ovaleden sarkan trombus: Trombolitik uygulama ile başarılı tedavi

Impending thrombus of the heart is a very rare condition and can be life-threatening. The patients with impending thrombus that are complicated with pulmonary embolism and paradoxal embolism may benefit from initial treatment with thrombolytic, especially when surgery is risky or inconvenient.

A 77-year-old male patient with complaints of dyspnea for 3 months was diagnosed as diffuse proliferative pulmonary disease (Fig. 1). The transesophageal echocardiogram revealed a moving large thrombus with snake-like structure in the left and right atria, impending in the

patent foramen ovale (PFO) (Fig. 2, Video 1. See corresponding video/movie images at www.anakarder.com). There were thromboses of right and left pulmonary arteries on pulmonary angiography. Because of deep femoral vein thrombosis, vena cava filter was fixed. Patient was evaluated as carrying high risk for operation, and he did not accept operation. Thrombolytic treatment (tissue plasminogen activator, t-PA)



Figure 1. The telecardiography view of diffuse proliferative pulmonary disease

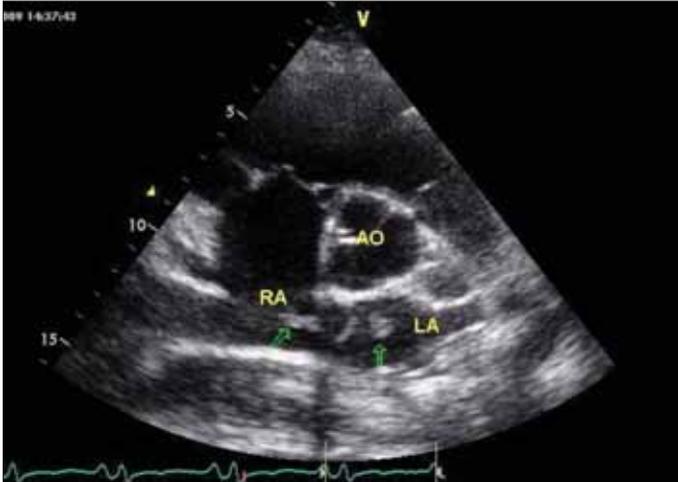


Figure 2. Transesophageal echocardiography view of a large, snake-like structure crossing foramen ovale of the interatrial septum
Ao - aorta, LA - left atrium, RA - right atrium

was performed. After t-PA treatment, no thrombi were detected in PFO and cardiac chambers on echocardiography (Fig. 3, Video 2. See corresponding video/movie images at www.anakarder.com).

The therapeutic options are surgery, thrombolytic application or anticoagulation treatment, or a combination of these treatments, but there is no consensus on an ideal treatment for an intra-cardiac thrombus traversing a PFO. Each alternative has to be considered separately. The patients with impending thrombus complicated with pulmonary embolism may benefit from initial treatment with thrombolytic, especially when surgical removal seems too hazardous and risky (older patients, pulmonary pathology, unstable status). In a patient denying surgery, thrombolytic treatment with echocardiography controls can be treatment of choice. Because surgical embolectomy presents potential complications and surgical risks are high, we believe that thrombolytic treatment was the best option in our patient.



Figure 3. Echocardiography view after thrombolytic treatment: no thrombus in patent foramen ovale or cardiac chambers is seen

LA - left atrium, LV - left ventricle, RA - right atrium, RV - right ventricle

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