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Chronic Localized Pericardial Effusion Due to Pectus Excavatum Deformity

Kunduracı Göğsü Deformitesine Bağlı Kronik Lokalize Perikardiyal Efüzyon

CASE IMAGE
OLGU GÖRÜNTÜSÜ

An 18-year-old female presenting with a chest pain complaint was referred to our hospital for etiological assessment of a chronic pericardial effusion. The chest pain was described as stabbing in nature and did not vary in severity with changes in position or respiration. She had been treated with ibuprofen and colchicine for over three months, but there was no reduction in the pericardial effusion or her symptoms. There was no history of any systemic illness or chronic medication. Rheumatological and oncological assessments carried out before her admission to our hospital did not identify any potential etiological causes. The physical examination was unremarkable, except for a pronounced pectus excavatum (PEX) and kyphosis. Her electrocardiography showed a normal sinus rhythm. The chest X-ray revealed a leftward displacement of the heart shadow, as well as the PEX and kyphosis (Figure 1A, B). Transthoracic echocardiography showed normal left and right ventricular systolic and diastolic functions, no valvular pathologes, and a mild localized pericardial effusion (max 7 mm adjacent to the right ventricle and apex) (Figure 1C, D) (Supplementary Video 1). Thoracic computerized tomography confirmed a moderate PEX deformity (with a Pectus or Haller index of 3.25) which was causing a slight indentation in the right ventricle and a pericardial effusion with a maximum thickness of 10 mm (Figure 1E, F). Due to the chronic chest pain, anteriorly localized chronic pericardial effusion, and high Haller index, the patient was referred to the Chest Surgery Department for a corrective operation.

Chronic and localized pericardial effusion, often resulting from impaired pericardial fluid drainage and/or irritation, is frequently observed in roughly one-third of patients with PEX deformity. The possibility of a PEX deformity as an etiological factor should be considered when patients present with chest pain and chronic localized pericardial effusion.

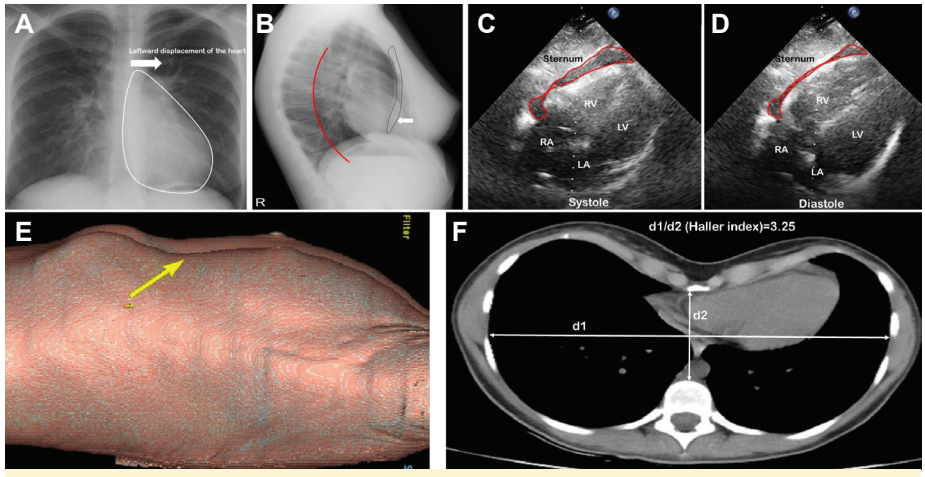

Figure 1. Chest X-ray demonstrates leftward displacement of the heart shadow (A) and kyphosis (B). Transthoracic echocardiography reveals a mild anteriorly localized pericardial effusion (C, D). Computerized tomography shows a prominent pectus excavatum (PEX) (E) with a Haller index of 3.25 (F).

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Supplementary Video 1. Subcostal view from the echocardiography displays the localized pericardial effusion adjacent to the right ventricle and apex.