

Evolving of a Giant Left Atrium Over the Years in Chest X-ray

Abdullah Kaplan^{1,2*} and Meral Kaplan³

¹Department of Cardiology, Kemer Public Hospital, Turkey

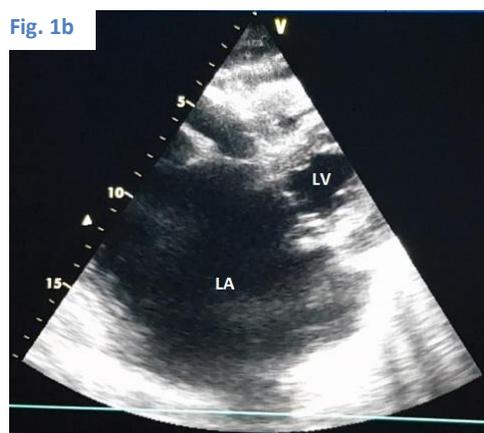
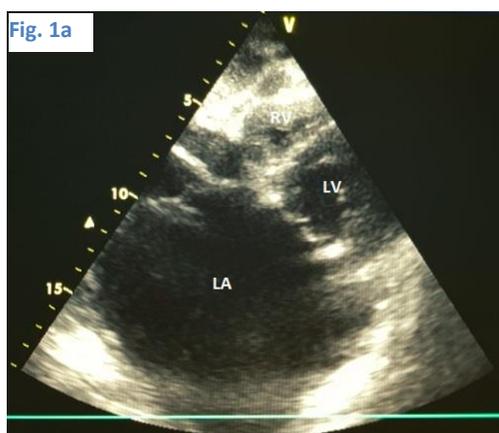
²Department of Pharmacology and Toxicology, American University of Beirut Faculty of Medicine, Lebanon

³Department of Radiology, Dinar Public Hospital, Turkey

*Corresponding author: Abdullah Kaplan, Department of Cardiology, Kemer Public Hospital, Yeni Mahalle, Dedeler Mevkii, No 31, Kemer, Antalya, Turkey, Tel: +90 242 814 15 50; E-mail: kaplanabd@gmail.com

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A 73-year-old woman was brought to the emergency unit due to shortness of breath. A diagnosis of pneumonia was made, and she was transferred to the intensive care unit. As for past medical conditions, she had chronic kidney disease and valvular heart diseases. In Previous years, she was recommended to undergo mitral valve surgery due to severe mitral regurgitation; however, she refused the surgical treatment and was given medication. Given valvular heart disease history and increased cardiothoracic index in the chest x-ray, transthoracic echocardiogram was performed. A giant left atrium (10.3*11.3 cm) alongside severe eccentric mitral regurgitation was recorded. The opacity occupying the entire lower zone of the chest x-ray was attributed to the giant left atrium. Occupation of the right side of chest by progressively enlarging the left atrium in the x-ray can be seen in the three chest radiographs taken since 2017. This image can be mistaken with tumor, pneumonic infiltration, and atelectasis.



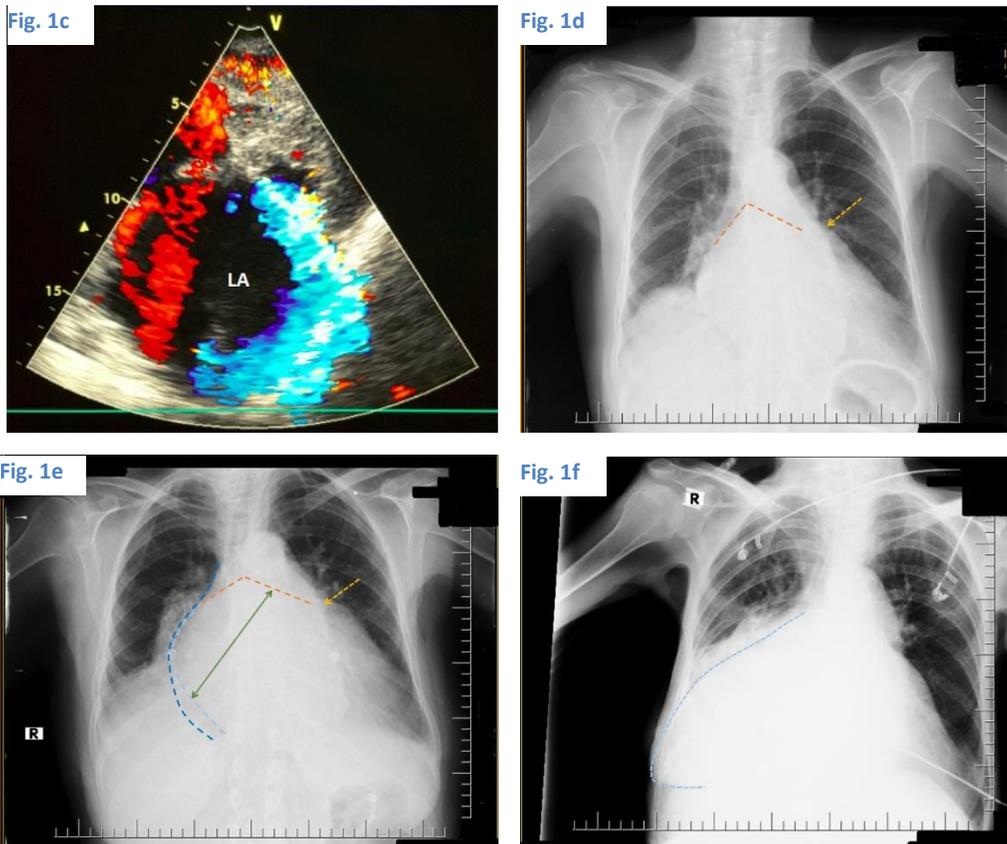


FIG. 1. Figure 1a, 1b, and 1c; the modified apical 4 chambers views demonstrate giant left atrium and Color Doppler recording of the eccentric mitral regurgitation. Figure 1d, 1e, and 1f display progressively increasing cardio-thoracic ratio in the three chest x-rays taken in 2017, 2019 and 2021, respectively. Figure 1d and 1e show splaying of the carina with increased the tracheal bifurcation angle to over 90 degrees (the orange dashed lines) and convex left atrial appendage (the yellow arrow). A double density sign (dark blue dashed line refers to the right atrial border, the light blue left atrial) is observed in figure 1e, and the oblique measurement from the left main bronchi to the left atrial border is greater 7 cm (the green solid line). In figure 1f, the right chest side is mainly occupied by the giant left atrium (the light blue dashed line), leading to atelectasis and reduced lung capacity.

Conflicts of Interest

The authors have nothing to disclose.

Data Availability Statements

The data underlying this article are available in the article and in its online supplementary material.