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Epicardial Fat Mimicking Pericardial Effusion: A Patient with Gastrointestinal Bleeding

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A 49-year-old morbid obese woman admitted our hospital with upper gastrointestinal bleeding. She had been diagnosed with pericardial effusion at two different visits, and had been taking ibuprofen 800 mg twice daily for a month. She had haemetemesis with coffee ground vomiting. Her detailed questioning revealed that she had stomach pain and heartburn occasionally. On her physical examination she was pale and diaphoretic. A complete blood count revealed a white blood cell count of 8.2×10^6 /mL with 54.1% neutrophils, and a hemoglobin level of 8.2 g/dL and hematocrit of 25.8%. Proton pump inhibitor therapy was initiated and ibuprofen was stopped. Her upper gastrointestinal system endoscopy revealed erythematous gastritis. A transthoracic echocardiography (TTE) was performed and pericardial echo-free zone was thought to be epicardial fat rather than pericardial effusion (Figure 1A-1C). Chest contrast-enhanced computed tomography (CT) was performed for further evaluation because of poor image quality on TTE. Epicardial fat was clearly differentiated from pericardial effusion by CT findings (Figure 1D).

Epicardial fat may have a similar echolucent appearance to that of a pericardial effusion. While TTE is usually sufficient for detecting pericardial abnormalities, CT imaging also can be helpful in some cases. Taking account the difficulty of the clinical scenario (obese patient with insufficient image quality on TTE) like in our patient, one should bear in mind CT imaging for differential diagnosis. It is also important to question patients for gastrointestinal symptoms before initiating a nonsteroidal anti-inflammatory drug. This case presentation highlights the need for caution in diagnosing pericardial effusion by echocardiography.



Figure 1: A-B: Parasternal long and short axis views showing pericardial echofree zone (arrows). The image quality is not sufficient to differentiate pericardial effusion from epicardial fat. C: Apical four chamber view showing pericardial echo-free zone (asterisk). D: Epicardial fat recognized from pericardial effusion by chest contrast-enhanced computed tomography (dotted line). *Corresponding author: Ozcan Basaran, Division of Cardiology, Mugla Sitki Kocman, University Education and Research Hospital, Orhaniye Mahallesi İsmet Catak Caddesi, Mugla, Turkey, Tel: +905065359013; Fax: +9025221307 62; E-mail: basaran_ozcan@yahoo.com

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