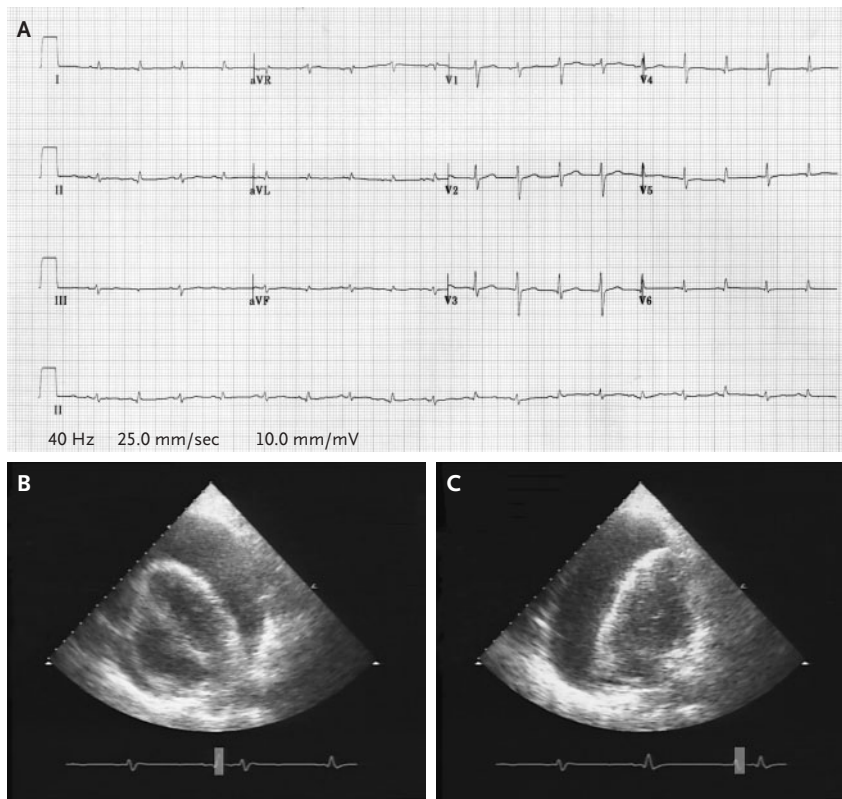


IMAGES IN CLINICAL MEDICINE

Swinging Heart



A 49-YEAR-OLD MAN WITH SMALL-CELL LUNG CARCINOMA WAS ADMITTED because of syncope. On examination, he had tachycardia (heart rate, 106 beats per minute), distended jugular veins, and muffled heart sounds. The blood pressure was 90/60 mm Hg. Pulsus paradoxus was not detected. The 12-lead electrocardiogram showed low QRS voltages with electrical alternans in multiple leads and flattening of the T waves (Panel A). Transthoracic echocardiography showed massive pericardial effusion and diastolic collapse of the right atrium and ventricle. Pericardiocentesis yielded 800 ml of fluid that was cytologically positive for pericarditis carcinomatosa. Immediately after the aspiration, the patient's hemodynamic condition improved. Correlation between the QRS alternation and a pendular swinging of the heart within the pericardial space is visible on the echocardiogram (Panels B and C and video clip).

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