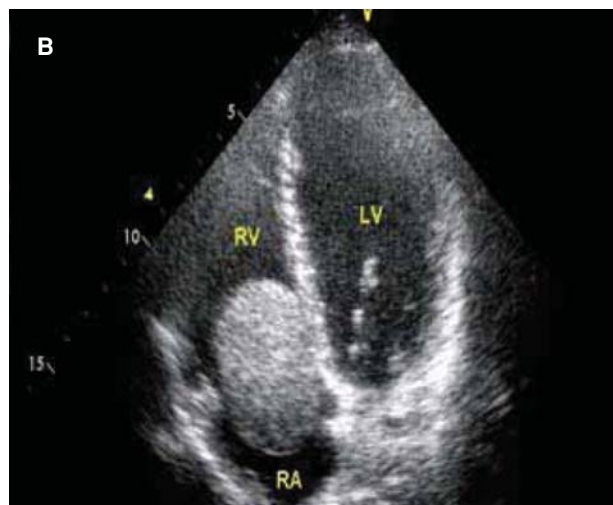
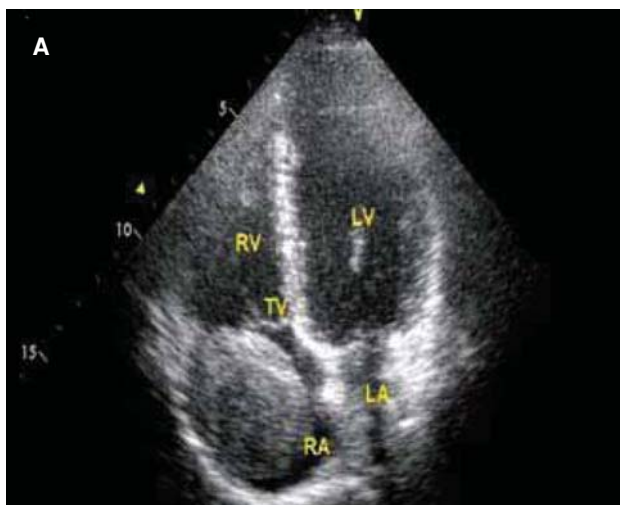


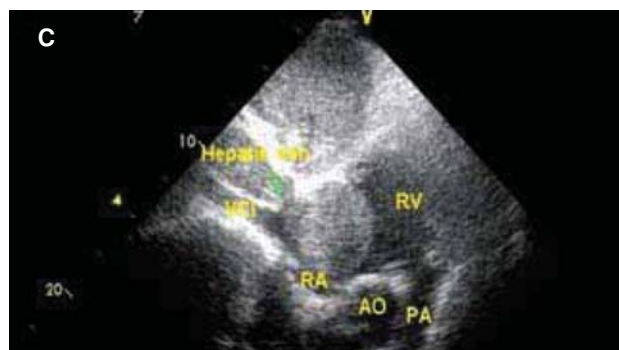
## Hepatocellular Carcinoma in the Right Atrium

## Sağ atriyumda hepatoselüler karsinom



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A 67-year-old man was admitted to the gastroenterology clinic due to swelling and pain in the abdomen. The patient presented with no cardiac-related complaints. His medical history showed that he underwent a tracheostomy 12 years ago due to laryngeal cancer. He has also been on lamivudine treatment for the past three years as a result of hepatitis B infection. His physical examination



demonstrated a blood pressure of 100/70 mmHg, heart rate of 84 beats/minutes, and respiratory rate of 18/minute. His body temperature was 36.5°C. Cardiac auscultation revealed rhythmic heart sounds and frequent extra beats. The first (S1) and second (S2) heart sounds were heard; however, no S3 and S4 were heard. A mid-diastolic murmur was occasionally heard at the tricuspid valve. His breath sounds were mildly increased. Abdominal examination revealed a slight convexity of the abdomen; there was no rebound tenderness. The liver was painlessly and palpable 2-3 cm below the right costal margin. There was no splenomegaly. Percussion of the Traube's space revealed normal results, and there was no ascites. Electrocardiography (ECG) demonstrated a sinus rhythm, with normal axis; the heart rate was 66/min and bigemini early ventricular beats were observed. A borderline increase of the cardiothoracic ratio was observed on chest x-ray. The patient's biochemistry tests revealed high AST, ALT and bilirubin levels; urea level was 95 mg/dL, uric acid was 9.6 mg/dL, HDL cholesterol level was 91 mg/dL, LDL cholesterol level was 81 mg/dL, which

le cardiac enzymes were found to be normal. His hemogram results showed a hemoglobin level of 13.5 g/dL, hematocrit as 36.7%, and an erythrocyte sedimentation rate of 85 mm/hour. Abdominal ultrasonography demonstrated lesions in the liver with largest having a diameter of 57x46 mm. In his abdominal magnetic resonance imaging hypodense solid cysts of 6x7 cm and of 5 cm were observed in segment 6 and segment 5 of the liver, respectively. His transthoracic echocardiography demonstrated an enlarged left atrium (42 mm), enlarged right ventricle (30 mm), and a 4x4.7 cm mass with regular margins in the right atrium originating from the hepatic vein (Figure A-C). The left ventricular dimensions and wall thickness were normal. Color Doppler evaluation demonstrated trace mitral and mild tricuspid regurgitation; the pulmonary artery pressure was measured as 30 mmHg. The patient with normal systolic function was found to have relaxation disorder. The patient was kept under observation at the oncology and gastroenterology clinics due to diagnosis of hepatocellular carcinoma, following microscopic and immunochemical analyses of the liver biopsy obtained.

**Figures.** Transthoracic echocardiographic apical four chamber imaging: **(A)** Image of an echogenic mass which fills the right atrium during systole with a closed tricuspid valve. **(B)** Image of the mass protruding into the right ventricle during diastole and narrowing the tricuspid valve orifice. **(C)** Subcostal image during thoracic echocardiography showing the mass passing into the right atrium, through the vena cava inferior by way of the hepatic vein (arrow) and filling the right atrium. LA: Left atrium; RA: Right atrium; LV: Left ventricle; RV: Right ventricle; TV: Tricuspid valve; PA: Pulmonary artery; VCI: Inferior vena cava; AO: Aortic valve.