Images in Cardiovascular Medicine

# Ampulla Cancer, Liver Cancer, and Lung Cancer Metastasis to Left Atrial Carcinoma

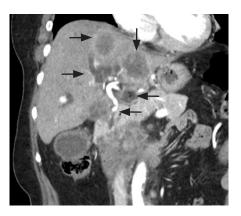
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64-year-old woman with obstructive jaundice presented to the hospital. A whole-abdomen enhanced computed tomography (CT) scan showed that common bile duct ampullary space was occupied with obstructive jaundice, multiple liver metastases, abdominal lymph node enlargement, and a small amount of pelvic effusion (Fig. 1). The patient received palliative care and hospice care, including percutaneous transhepatic biliary drainage and endoscopic retrograde biliary stent implantation. Preoperative echocardiography showed that there was an isoechoic mass in the left atrium near the atrial septum, which connected with the right superior pulmonary vein; the size of the mass was  $20 \times 13$  mm (Fig. 2). Occupation of cardiac space did not lead to mitral valve obstruction and was not treated. A chest CT scan showed bilateral lung metastases and chronic inflammation of the left lung tongue. A cardiac CT scan showed a low-density area in the left atrial septum. The pathologic classification of lung cancer was non-small cell lung cancer, and programmed cell death protein 1 immunotherapy was performed. This case involves an ampulla cancer, liver cancer, and lung cancer metastasis to left atrial carcinoma.

# Comment

Tumors in the heart are rare and difficult-to-diagnose pathologies. There are primary and secondary tumors; secondary tumors include metastases of other tumors.<sup>1</sup> Metastatic cardiac tumors are rare in clinical practice.<sup>2</sup> The left atrial mass was considered thrombus or left atrial myxoma based on echocardiographic imaging analysis alone.



*Fig. 1* Abdomen enhanced computed tomography scan shows multiple intrahepatic cancers (arrows).



Fig. 2 Echocardiography shows an isoechoic mass in the left atrium (arrow) near the atrial septum, which connected with the right superior pulmonary vein.

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#### Keywords:

Echocardiography; liver cancer; lung cancer; cardiac tumor

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© 2022 by the Texas Heart <sup>®</sup> Institute, Houston Concomitant occurrence of lung carcinoma and an atrial myxoma is rare.<sup>3</sup> In most cases, when a hepatocellular carcinoma is detected, it has spread to regional or distant sites. The most frequent locations of hepatocellular carcinoma metastasis include the pulmonary system, musculoskeletal system, lymphatic system, and central nervous system. Indeed, intra-atrial metastasis is a rare phenomenon and associated with poor outcomes.<sup>4</sup>

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