Spontaneous rupture of hepatocellular carcinoma with tumor embolism in pulmonary arteries

Sir,

A 68-year-old woman was brought to our emergency department with progressively worsening abdominal pain and abdominal distension followed by sudden onset of shortness of breath. The symptoms started an hour back while she was having her dinner. At presentation, she was diaphoretic with blood pressure of 82/47 mmHg and heart rate of 120. Her abdomen was distended and soft but tender in all quadrants. No past history was available as she was a tourist. Electrocardiography was unremarkable. The chest radiograph revealed bilateral pleural effusion. She was resuscitated with fluids, and an urgent computed tomography (CT) of the abdomen was performed. CT abdomen in the arterial phase revealed a large heterogeneous subcapsular exophytic mass in the right lobe of the liver [Figure 1a-d] actively bleeding into the peritoneal cavity. There was large amount of high-density fluid representing hemoperitoneum. In addition, there were expansive thrombi in the middle hepatic vein and left hepatic vein, extending into the inferior vena cava. Careful evaluation of the partially included images of the lower thorax showed large filling defects in bilateral lower lobe pulmonary artery, consistent with pulmonary emboli. The liver itself was small and shrunken with large splenorenal collateral vessels suggesting the background of cirrhosis with portal hypertension. Based on CT findings, a diagnosis of ruptured hepatocellular carcinoma (HCC) was made, and the patient was immediately transferred to the interventional radiology department. The right hepatic artery was cannulated and embolized with polyvinyl alcohol particles.

Spontaneous rupture of HCC is a well-known complication. To the best of our knowledge, this is the first case of HCC with spontaneous rupture in the peritoneal cavity and embolization in the pulmonary arteries at the same time. Transarterial embolization is accepted as an effective and lifesaving procedure to achieve hemostasis in cases of ruptured HCC.

Declaration of patient consent
The authors certify that they have obtained all appropriate patient consent forms. In the form the patient(s) has/have given his/her/their consent for his/her/their images and other clinical information to be reported in the journal. The patients understand that their names and initials will not be published and due efforts will be made to conceal their identity, but anonymity cannot be guaranteed.

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Conflicts of interest
There are no conflicts of interest.
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Figure 1: (a-d) Coronal computed tomography of the abdomen shows an exophytic tumor in the right lobe of the liver (asterisk in a, c, d), large hemoperitoneum (black arrows in a, b, c) with tumor thrombi in the left and middle hepatic veins (white arrows in a, d). Note the pulmonary emboli (white arrows in b, c)