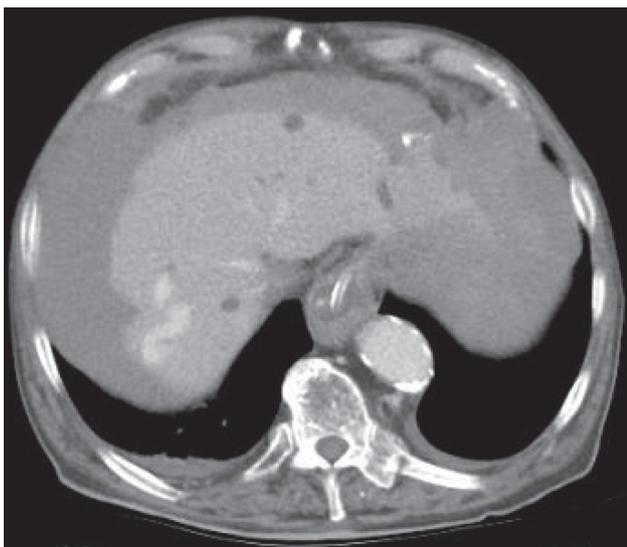


## CONTINUING MEDICAL EDUCATION ΣΥΝΕΧΙΖΟΜΕΝΗ ΙΑΤΡΙΚΗ ΕΚΠΑΙΔΕΥΣΗ

### Surgery Quiz – Case 38

An 86-year-old male patient with Child-Pugh A HBV-cirrhosis was ambulance transferred with Advanced Trauma Life Support (ATLS)-stage 3 shock. Upon admission the patient was afebrile, had mean arterial pressure (MAP) 50 mmHg, heart rate 77/min, respiratory rate 19/min, normal consciousness, hemoglobin (Hb) 11 g/dL, Na 130 mmol/L, PaO<sub>2</sub> 86 mmHg, FiO<sub>2</sub> 29% (nasal cannula 2 L/min), lactic acid 5 mmol/L, central venous pressure (CVP) 2 cmH<sub>2</sub>O. As no criteria for sepsis and no evidence of upper-gastrointestinal bleeding were present, the patient considered to have undifferentiated septic or hemorrhagic shock and admitted to intensive care unit (ICU) with sequential organ failure assessment (SOFA) score 6. Initial resuscitation included administration of lactated Ringer's solution and norepinephrine with target MAP 60 mmHg, albumin 100 g, third-generation cephalosporin, proton pump inhibitors (PPIs), 2 fresh frozen plasma (FFP) units with transient response. Whole-body computed tomography (CT) performed as shown in figure 1.

What is your diagnosis?



**Figure 1.** Computed tomography (CT) revealed no features of pulmonary infection, liver surface nodularity, mild ascites at Morrison and Douglas pouch with 35 to 45 HU density, a persistent hypoattenuating in all phases peripheral segment III nodule with active intravenous contrast extravasation, dilated vena cava, no signs of portal hypertension, no intraperitoneal varices and no free intraperitoneal air.

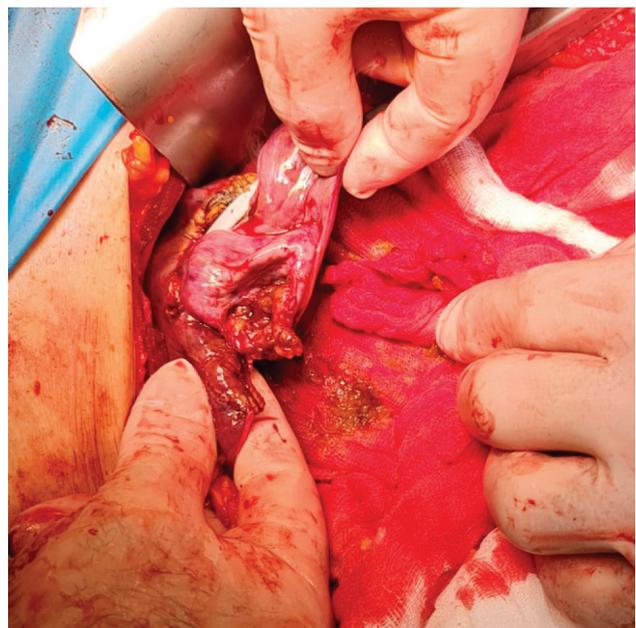
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#### Comments

Based on clinical and imaging findings, undifferentiated shock attributed to a ruptured segment III peripheral borderline nodule with hemoperitoneum managed by wedge resection with uneventful recovery (fig. 2). Biopsy of the surgical specimen revealed an



**Figure 2.** Intraoperative image showing the ruptured peripheral segment III nodule treated with wedge resection. Biopsy of the surgical specimen revealed an early hepatocellular carcinoma (HCC).

early-hepatocellular carcinoma (HCC). Sepsis and variceal upper-gastrointestinal bleeding are the most common causes of shock and ICU admission in cirrhosis. In patients with undifferentiated shock, early whole-body CT with emphasis in ascitic fluid density should be performed to exclude rare causes such as secondary peritonitis and hemoperitoneum from a ruptured intraperitoneal varix or HCC.

## References

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