

Near-fatal hemorrhagic shock after endoscopic ultrasound-guided liver biopsy

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Endoscopic ultrasound (EUS)-guided liver biopsy with a 19-gauge fine-needle aspiration (FNA) needle is safe and provides excellent diagnostic yield [1–4]. Post-procedural bleeding is a well-known complication of liver biopsy [5]. Although it is reasonable to assume that similar complications may arise after EUS-guided liver biopsy, no complications of this nature have been reported thus far.

We present a case of hemorrhagic shock after EUS-guided liver biopsy. A 60-year-old man with no medical history was hospitalized with painless jaundice and severe dehydration of 2 weeks' duration. Liver tests showed cholestasis (bilirubin 859 µmol/L). The serum creatinine was 1165 µmol/L. Gallstones were noted on abdominal ultrasound, with no dilated ducts and no portal hypertension.

EUS was performed to evaluate the cholestasis further. After biliary obstruction had been excluded, transgastric EUS-guided liver biopsy was performed with a standard 19-gauge needle (EchoTip; Cook Medical, Bloomington, Indiana, USA). Three passes were executed with a "wet-stylet" technique. The platelet count was 83 000/mm³, and the international normalized ratio (INR) was 1.2.

The patient was discharged from the recovery unit 1 hour after the procedure. At 6 hours after the procedure, he was found

unresponsive in his bed. Immediate resuscitation was performed. Laparotomy showed a massive hemoperitoneum with active bleeding from the liver. Five units of blood were transfused. The postoperative evolution was unremarkable. Liver histology found nonspecific cholestasis. The liver and renal function test results normalized 15 days after admission.

In most institutions, the post-procedural recovery time for EUS is approximately 60 minutes. However, it is customary to keep patients under observation longer with bed rest for 2 to 4 hours after they undergo percutaneous liver biopsy [5]. Given the complication of bleeding reported here, we now monitor patients for 4 hours after EUS-guided liver biopsy – as is done according to protocols for percutaneous liver biopsy.

In conclusion, EUS-guided liver biopsy can result in severe bleeding. Post-biopsy surveillance should be adjusted accordingly. Platelet dysfunction induced by renal failure may also have contributed to the bleeding and might be considered a relative contraindication to EUS-guided liver biopsy.

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Competing interests: None

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