Hemobilia due to a cystic artery pseudoaneurysm on ultrasound

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CASE REPORT

An 85-year-old woman with a history of gallbladder stones presented with epigastric pain and vomiting. Blood chemistry showed: GGT 350, AP 215, bilirubin 3.4 (direct 2.6) and CRP 2.11. Ultrasound revealed a thickened gallbladder with a stone, echogenic bile and a 3-cm intravesical collection around the calculus (Fig. 1). Doppler examination showed bidirectional vascular flow expressed as two different colors within the intravesical collection (Fig. 2).

Later she presented with melena, which prompted an endoscopic retrograde cholangiography procedure that resulted in bleeding and clot removal. An angio-CT scan was performed due to the suspicion of hemobilia due to a pseudoaneurysm complicating calculus cholecystitis. The scan showed a dilated cystic artery with a pseudoaneurysm (Fig. 3). The laparoscopic cholecystectomy specimen had a recent bleeding site.

DISCUSSION

Cystic artery pseudoaneurysm is a rare, usually iatrogenic cause of hemobilia (1), although cases secondary to cholecystitis have been reported (2). Arterial wall erosion from inflammation may cause its development (2).

Ultrasound may identify the focally dilated artery as a collection within the gallbladder (3). Doppler ultrasound revealed bidirectional vascular flow which is a mix of...
two colors due to the turbulent flow inside the pseudoaneurysm. This is known as the “yin-yang sign” due to its similarity with the Asian symbol (3). CT angiography or arteriography demonstrated the focally dilated artery (1). However, doppler ultrasound was the most useful study to confirm the suspicion in a rapid, effective, non-invasive manner in our case.

REFERENCES