

Hemobilia Diagnosed by Percutaneous Ultrasonography and Treated by Endoscopic Retrograde Cholangiography



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Abstract

Here the authors report the case of an elderly woman who had upper abdominal pain, upper gastrointestinal hemorrhage, and jaundice (a symptomatic triad termed the 'Quincke' triad) a few days after endoscopic sphincterotomy. Abdominal ultrasonography demonstrated an echo-rich filling of the choledochus consistent with hemobilia. Endoscopic retrograde cholangiography was immediately performed and blood clots were removed from the common bile duct. A nasobiliary catheter was placed to irrigate the bile duct for prevention of recurring obstruction of the bile ducts from blood clots. Further follow-up of the patient was uneventful. This article is part of an expert video encyclopedia.

Keywords

Endoscopic papillotomy; Endoscopic retrograde cholangiography; Endoscopic retrograde cholangiopancreatography; Endoscopic sphincterotomy; Endoscopic ultrasound; Hemobilia; Percutaneous ultrasound; Video.

Video Related to this Article

Video available to view or download at doi:10.1016/S2212-0971(13)70216-4

Technique

Endoscopic retrograde cholangiography (ERC).
Ultrasonography.

Materials

- Ultrasonography
 - Hitachi HI VISION™ 8500, Hitachi Medical Systems Europe Holding AG, CH-6300 Zug, Switzerland.
- X-ray
 - Artis Zee MP, Siemens Healthcare, Erlangen, Germany.
- Endoscopy
 - TJF-Q180V duodenoscope, Olympus Medical Europe, Hamburg, Germany.
 - VisiGlide guide-wire 0.035", Olympus Medical Europe, Hamburg, Germany.
 - Multi-3V Plus stone extraction catheter, Olympus Medical Europe, Hamburg, Germany.

Background and Endoscopic Procedure

An elderly female patient presented for suspected bile duct stones and was transferred to undergo ERC. Endoscopic sphincterotomy (EST) was done and a grossly enlarged

common bile duct was revealed, but no stone could be detected. Because of thrombosis of the superior mesenteric vein, therapeutic anticoagulation with heparin was introduced 6 h after EST. After 3 days, the patient developed right-upper quadrant abdominal pain, nausea, and fever. Abdominal ultrasonography was scheduled and revealed hyperechoic material within the common bile duct. Hemobilia was suspected and the patient underwent ERC to remove the blood clots and to insert a nasobiliary flushing catheter.

Approximately two-thirds of cases with hemobilia are iatrogenic and occur for example postoperatively, in needle puncture of the liver, or after instrumentation in ERC. Moreover, bile duct or liver tumors, gallstone disease, and inflammatory conditions (ascariasis, polyarteritis nodosa, and others), or accidental trauma may cause hemobilia. Coagulopathy or anticoagulants may significantly contribute to elicit bleeding from the bile ducts. The 'Quincke' triad of upper abdominal pain, upper gastrointestinal hemorrhage, and jaundice is the classical presentation of hemobilia that only is existent in approximately 22% of cases. Hemobilia may be major, constituting life-threatening hemorrhage, but is often minor and can be managed conservatively; it may present many weeks after the initial injury. If not self-limiting, transarterial embolization may be helpful. A nasogastric catheter can be used to flush the biliary tract to avoid occlusion of the bile duct with blood clots.

Key Learning Points/Tips and Tricks

- Hemobilia is a significant differential diagnosis for upper gastrointestinal tract bleeding.
- In most cases, hemobilia is secondary to medical interventions such as surgical resections, percutaneous, or endoscopically guided punctures or ERC.

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- Blood clots may cause biliary obstruction.
- Hemobilia may be self-limiting, and endoscopic interventions, transarterial embolization, or surgery are available to treat all other cases.

Scripted Voiceover

Time (min:sec)	Voiceover text
0:03	Percutaneous ultrasonography was performed in an elderly lady with right-upper quadrant abdominal pain who had undergone endoscopic retrograde cholangiography with endoscopic sphincterotomy three days before. Hyperechoic material is detected in the grossly enlarged common bile duct. Within the gall bladder, there is as well some material detected, corresponding to blood or sludge.
0:31	Duodenoscopy shows a blood clot protruding from the papilla of Vater.
0:43	By repeatedly pulling the balloon catheter through the enlarged bile duct, all blood clots were completely

removed. A balloon catheter was preferred over a Dormia basket not to provoke any trauma to the bile duct or papilla.

1:43	Successful extraction of all material from the choledochus is confirmed by cholangiography.
1:48	Consequently, cloudy dark bile is discharged from the papilla now.
2:03	Finally, a naso-gastric tube is inserted and flushed with contrast and saline for ongoing irrigation. The bile system is evacuated from all contrast that is poured out into the duodenum and backward into the stomach.

Further Reading

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