

Ultrasound-Guided Emergency Endoscopic Retrograde Biliary Drainage Without Radiography

In most hospitals, endoscopic retrograde cholangiopancreatography (ERCP) is carried out in the endoscopic or radiological unit. However, transporting critically ill patients and their monitoring equipment outside of the intensive care unit can create considerable logistical problems. Many intensive care units are not equipped with quality fluoroscopy facilities for conducting ERCP examinations, although an ultrasound machine should be easily made available in most.

We recently treated two patients with biliary obstruction who were thought to be too ill to undergo ERCP in our endoscopic unit. The first patient, a 67-year-old woman with suspected obstructive cholangitis, was hemodynamically unstable and under artificial ventilation due to respiratory failure. The second patient was a 76-year-old woman who presented with severe abdominal pain and spiking fever several hours after an endoscopic sphincterotomy for papillary stenosis. Since the pain could only be controlled by intravenous morphine, she was transferred to the intensive care unit.

With the patients lying on their left side, the duodenoscope was advanced to the papilla. The orifice was gently cannulated using a standard ERCP catheter. A guide wire was then advanced through

the cannula into the common bile duct (Figure 1). After clear visualization of the wire in the common duct, a pigtail catheter was placed in the first patient, and a straight catheter in the second. Ultrasound examination showed marked aerobilia, confirming the correct positioning of the biliary prostheses (Figure 2). Since hemobilia was the cause of obstruction in the second patient, an additional nasobiliary tube was inserted to allow flushing of the biliary system. In both patients, satisfactory biliary drainage was achieved within 20 minutes of starting the procedure. Both patients tolerated the examination well.

The technique appears to be very suitable for severely ill patients who cannot be moved from the intensive care unit. We believe it should be attempted before more risky percutaneous techniques such as ultrasound-guided percutaneous transhepatic biliary or gallbladder drainage, are used, particularly in patients with coagulation disorders (1,2). In addition, ultrasound-guided retrograde biliary drainage can also be used in early pregnancy, and in cases of thyrotoxicosis or severe iodine allergy when roentgen ray or iodine exposure should be avoided.

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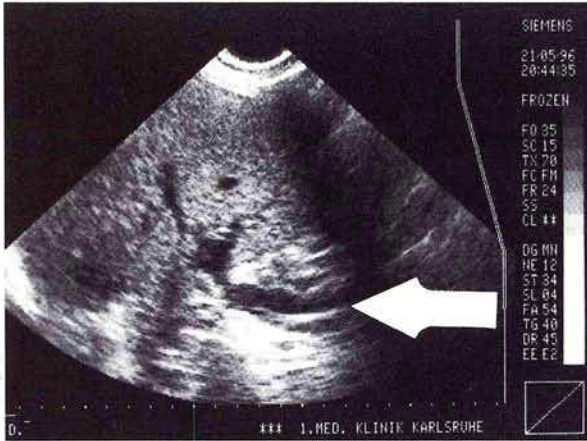


Figure 1: Ultrasound demonstrates the guide wire (arrow) inside the dilated common bile duct.

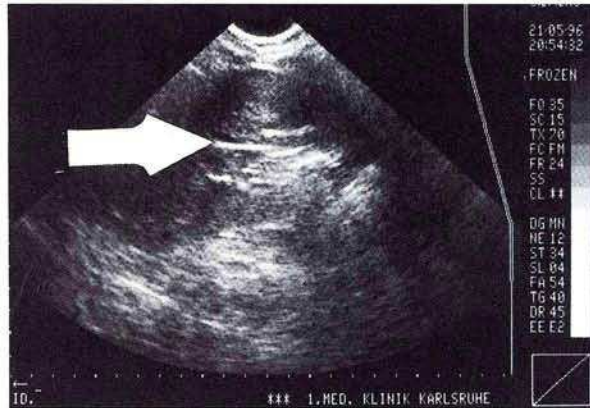


Figure 2: Aerobilia (arrow) confirms adequate biliary drainage.

References

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