

## An unusual malignant main bile duct stricture: a biliary metastasis of endometrial adenocarcinoma.

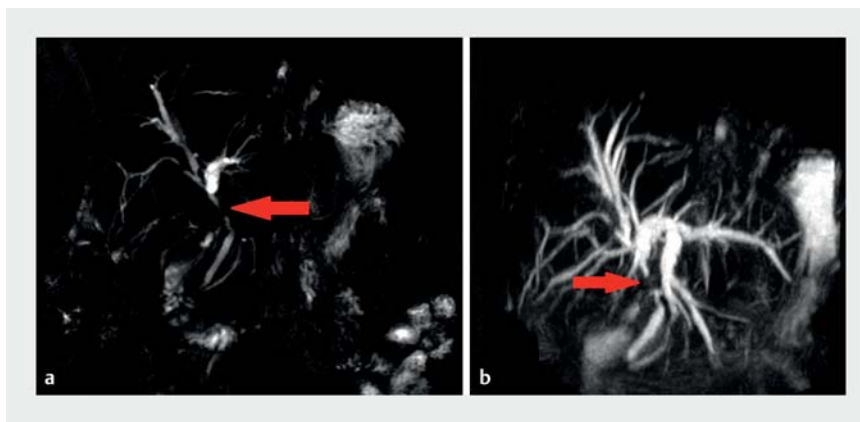


Biliary strictures are frequently encountered in interventional endoscopy. Their etiological diagnosis may be complicated [1]. Endoscopic ultrasound (EUS) guided biopsies, brush cytology, and wire-guided biopsies allow a diagnosis in most cases. Single-operator cholangioscopy (SOC) has radically changed the diagnostic approach, allowing visualization of the lesion, endoscopic characterization, and targeted biopsies [2].

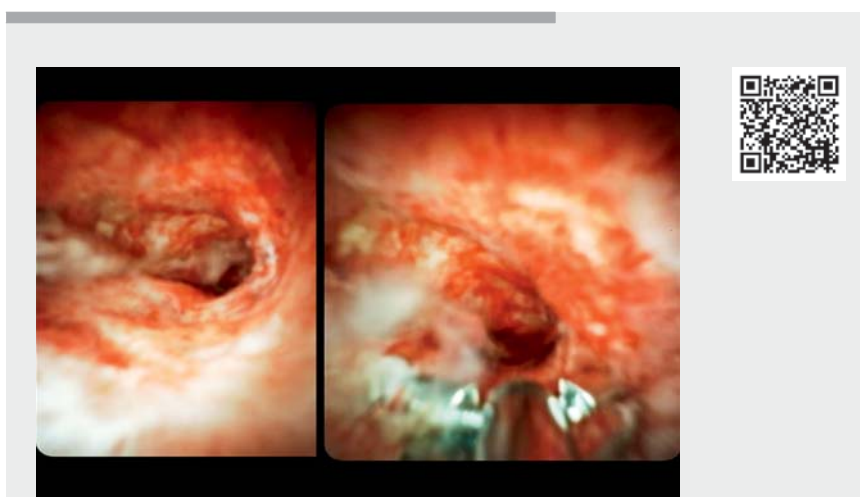
We report the case of a 71-year-old woman with a history of endometrial adenocarcinoma, with muscular and bone recurrence 4 years after treatment. She developed a sudden jaundice without any other clinical signs. A magnetic resonance cholangiopancreatography found a circumferential parietal thickening of the main bile duct with dilatation of the intrahepatic bile ducts (► Fig. 1). We decided to perform an EUS, which showed extensive cholangitis in the middle part of the bile duct with circumferential thickening of the bile duct mucosa. A 22 G needle biopsy was performed. Endoscopic retrograde cholangiopancreatography (ERCP) was then performed (► Fig. 2) with SOC, which showed that the strictured area was indeed a fibrous stenosis with anarchic vascularization (► Video 1).

Biopsies were taken with forceps. Brush cytology and wire-guided biopsies were also performed. The procedure was completed with the placement of three plastic stents (one 15 cm and 8.5 Fr stent in the left bile duct; one 12 cm and 8.5 Fr stent and one 12 cm and 7 Fr stent in the right intrahepatic bile ducts). Histological examination found carcinoma cells (mutated p53, PAX8 +), which were presumed to be metastasis of gynecological origin (► Fig. 3).

The use of SOC allows a finer analysis of indeterminate biliary stenosis. The presence of aberrant vascularization seems to be correlated with the neoplastic



► **Fig. 1** Biliary magnetic resonance cholangiopancreatography imaging (MRCP) showing the main bile duct stricture with dilatation of the intrahepatic bile ducts. **a** MRCP sequence showing the biliary stricture (red arrow) and biliary dilatation. **b** Three-dimensional reconstruction of the biliary system showing the biliary stenosis (red arrow).



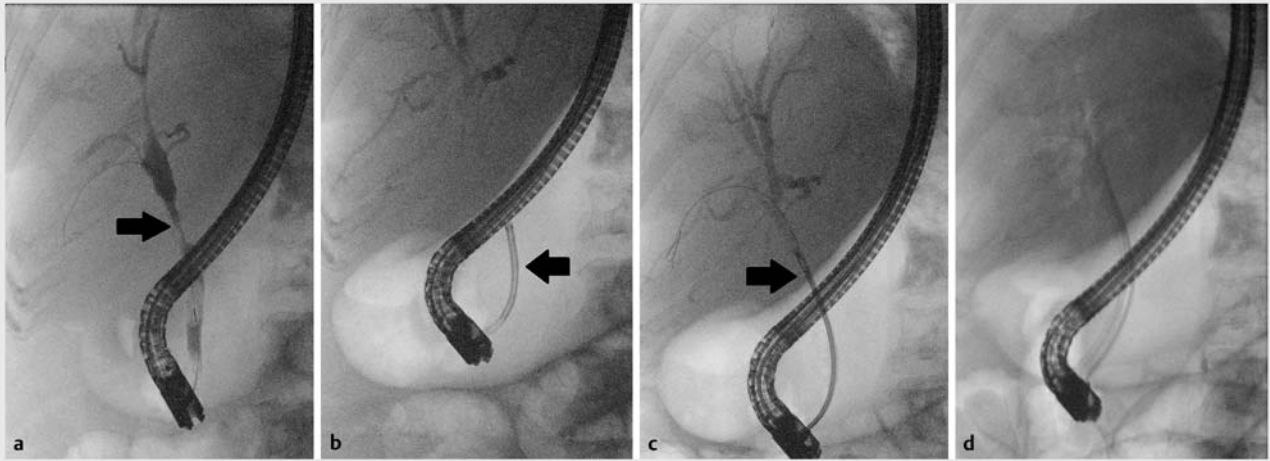
► **Video 1** Endoscopic retrograde cholangiopancreatography and single-operator cholangioscopy for the diagnosis of indeterminate biliary stenosis and drainage with three plastic stents.

nature of the lesion [3]. SOC therefore allows macroscopic analysis of the lesion and targeted biopsies, probably making biliary sampling less random [4, 5].

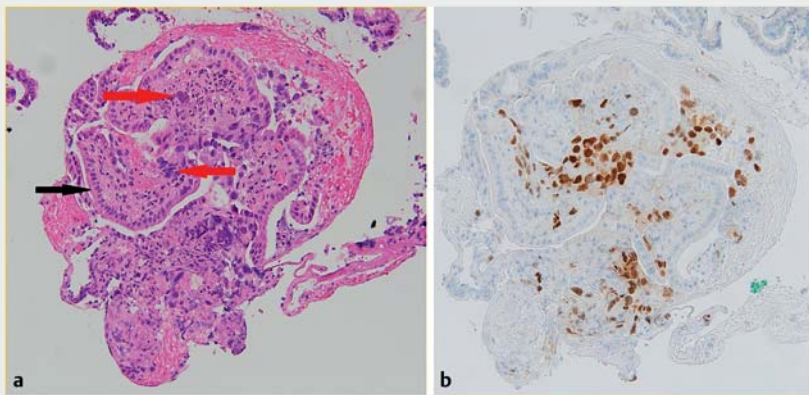
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► **Fig. 2** Retrograde cholangiography showing the different stages of the endoscopic retrograde cholangiopancreatography procedure. **a** Retrograde cholangiography showing the stricture of the main bile duct (black arrow). **b** Retrograde cholangiography with single-operator cholangioscopy (black arrow). **c** Retrograde cholangiography with wire-guided forceps (black arrow). **d** Placement of three plastic biliary stents.



► **Fig. 3** Biopsies of the main bile duct under single-operator cholangioscopy. **a** Normal biliary epithelium (black arrow) and neoplastic cells (red arrows) with hematoxylin-eosin stain (magnification  $\times 200$ ). **b** Neoplastic cells of gynecological origin with immunohistochemistry stain (PAX 8).

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### Competing interests

The authors declare that they have no conflict of interest.

## References

- [1] Bowlus CL, Olson KA, Gershwin ME. Evaluation of indeterminate biliary strictures. *Nat Rev Gastroenterol Hepatol* 2016; 13: 28–37
- [2] Gerges C, Beyna T, Tang RSY et al. Digital single-operator peroral cholangioscopy-guided biopsy sampling versus ERCP-guided brushing for indeterminate biliary strictures: a prospective, randomized, multicenter trial (with video). *Gastrointest Endosc* 2020; 91: 1105–1113
- [3] Robles-Medranda C, Oleas R, Sánchez-Carriell M et al. Vascularity can distinguish neoplastic from non-neoplastic bile duct lesions during digital single-operator cholangioscopy. *Gastrointest Endosc* 2021; 93: 935–941
- [4] Angsuwatcharakon P, Kulpacharapong S, Moon JH et al. Consensus guidelines on the role of cholangioscopy to diagnose indeterminate biliary stricture. *HPB (Oxford)* 2021; 24: 17–19
- [5] Almadi MA, Itoi T, Moon JH et al. Using single-operator cholangioscopy for endoscopic evaluation of indeterminate biliary strictures: results from a large multinational registry. *Endoscopy* 2020; 52: 574–582

## Bibliography

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