

## A challenging case of giant biliary stones in a patient with situs inversus totalis: conventional ERCP combined with intraductal cholangioscopy and laser lithotripsy

A 65-year-old man with situs inversus was admitted with jaundice, nausea, and upper abdominal pain. A computed tomography scan confirmed the diagnosis of situs inversus totalis and revealed a large stone in the main bile duct with distal stenosis.

The patient and endoscopist were positioned in the usual manner during endoscopic retrograde cholangiopancreatography (ERCP). As a result of the anatomical abnormality, the duodenoscope was rotated through 180° in D2 to enable visualization of the ampulla. After wire-guided cannulation, fluoroscopy showed two giant stones (23 mm each) in the main bile duct. Mechanical lithotripsy was attempted but was unsuccessful. Three days later, intraductal cholangioscopy using the SpyGlass DS system (Boston Scientific Inc., Marlborough, Massachusetts, USA) and laser lithotripsy were performed successfully. A fully covered, biliary, self-expandable metal stent was placed (▶ **Video 1**) across the stenosis in the distal bile duct. Fragmentation of the large stones was noted, and the patient was asymptomatic 6 weeks later.

This is the first case report of a patient with complete situs inversus where ERCP, SpyGlass, and laser lithotripsy were used successfully. We wish to highlight that the endoscopist–patient orientation in this case was the same as that adopted in conventional ERCP in patients without anatomical anomalies. Some case reports of successful ERCP in patients with situs inversus have involved modification to the conventional technique [1]. These modifications include changes to the position of the patient prior to or during the procedure, or a different position for the



▶ **Video 1** Endoscopic approach in situs in versus.

physician, such as the “mirror” technique [2, 3]. Our impression is that the changes to the classical ERCP techniques are not necessary in patients with situs inversus.

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### Competing interests

None

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## References

- [1] Hu Y, Zeng H, Pan XL et al. Therapeutic endoscopic retrograde cholangiopancreatography in a patient with situs inversus viscerum. *World J Gastroenterol* 2015; 21: 5744 – 5748
- [2] de la Serna-Higuera C, Perez-Miranda M, Flores-Cruz G et al. Endoscopic retrograde cholangiopancreatography in situs inversus partialis. *Endoscopy* 2010; 42 (Suppl. 02): E98
- [3] Garcia-Fernandez FJ, Infantes JM, Torres Y et al. ERCP in complete situs inversus viscerum using a "mirror image" technique. *Endoscopy* 2010; 42 (Suppl. 02): E316 – 317

## Bibliography

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