British Journal of Hospital Medicine

Br. J. Hosp. Med. (Lond) **2026**; 87(8): 52234
https://doi.org/10.31083/BJHM52234

Letter

Shared Decision-Making and Professional Responsibility in High-Risk Endoscopic Retrograde Cholangiopancreatography for a Patient With Ankylosing Spondylitis: A Case-Based Reflection in Medical Ethics and Education

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Academic Editor: John Alcolado
Submitted: 24 March 2026 Revised: 26 April 2026 Accepted: 29 April 2026 Published: 6 August 2026

1. Introduction

Acute cholangitis secondary to choledocholithiasis is a potentially life-threatening condition that requires timely biliary decompression, most commonly achieved by endoscopic retrograde cholangiopancreatography (ERCP) [1]. However, ERCP can become technically demanding in patients with significant anatomical limitations that interfere with endoscopic access, airway management, or procedural positioning [2]. In such situations, clinical decision-making often extends beyond technical feasibility and involves patient-centred considerations.

Ankylosing spondylitis (AS) is characterized by progressive spinal rigidity and deformity, which can severely restrict cervical mobility and mouth opening. These changes can substantially complicate airway management, which is well documented in the literature [3,4]. However, the implications of these anatomical limitations for endoscopic procedures have been less frequently reported, although they may increase procedural difficulty. The present case illustrates this issue. In such circumstances, clinicians often face a difficult balance between procedural risk and the pursuit of definitive treatment. In this setting, airway difficulty affects not only anaesthetic management but also the choice and performance of the endoscopic procedure.

Effective management of technically challenging procedures depends on multidisciplinary collaboration among gastroenterologists, anaesthesiologists, and specialized nursing staff, as such teamwork supports procedural planning, risk reduction, and patient safety in complex endoscopic settings [5]. In complex clinical situations, decisions are influenced not only by technical considerations but also by communication between clinicians and patients. In situations where procedural risks are substantial and multiple treatment options exist, patient-centred care and shared decision-making play crucial roles in guiding appropriate management.

Here, we present a case of recurrent acute cholangitis in a patient with long-standing ankylosing spondylitis in whom ERCP posed substantial anaesthetic and technical risks. The case is therefore presented primarily as a reflection of how clinicians may approach a high-risk yet potentially beneficial intervention when clinical needs, available alternatives, patient preferences, and the duty to avoid preventable harm must be considered together. We also discuss how the Hippocratic tradition can be interpreted in this setting not as a mandate to pursue intervention at all costs but as a reminder that beneficence, nonmaleficence, patient autonomy, and professional judgement must be considered together. The educational value of this case lies in showing that patient involvement in high-risk decisions should follow, rather than replace, careful professional assessment. For trainees, this case highlights that difficult procedural decisions require not only technical competence but also communication, multidisciplinary planning, and professional judgement.

2. Case Presentation

A 75-year-old man with ankylosing spondylitis (AS) presented with recurrent episodes of fever, abdominal pain, and jaundice during the previous month. He had a previously documented gallbladder stone on ultrasonography, and these clinical features were considered consistent with recurrent acute cholangitis, likely secondary to migration of the gallstone into the common bile duct. Prior antibiotic therapy at a local hospital had provided only temporary relief. Laboratory findings revealed elevated inflam-

Fig. 1. Positioning of the patient with ankylosing spondylitis and limited cervical mobility. Patient positioning demonstrates severely limited cervical spine mobility and reduced mouth opening associated with long-standing ankylosing spondylitis. The image is a cropped view focusing on the neck and oral opening; the patient's facial features are not identifiable.

matory markers and abnormal liver function tests, supporting the diagnosis, and imaging studies suggested biliary obstruction. Magnetic resonance cholangiopancreatography (MRCP) was not performed because the patient had recurrent symptoms, laboratory abnormalities, and imaging findings suggestive of biliary obstruction, and timely therapeutic biliary intervention was considered clinically necessary after multidisciplinary evaluation. Because of the anticipated procedural difficulty related to his severe spinal deformity and restricted airway, clinicians at the referring institution recommended percutaneous transhepatic biliary drainage (PTBD) as a safer alternative to endoscopic treatment.

In search of a more definitive solution, the patient presented to our centre. During the consultation, the patient expressed a clear preference for definitive treatment rather than temporary biliary drainage alone. The team explained that ERCP might allow stone extraction and avoid repeated drainage procedures but that the procedure carried increased risk because of severe cervical rigidity, restricted mouth opening, anticipated airway difficulty, and challenging endoscopic positioning. The risks discussed included post-ERCP pancreatitis, bleeding, cholangitis, perforation, cardiopulmonary events, failure of cannulation, and the possibility of terminating the procedure if airway or procedural safety could not be maintained. Risk estimates were explained with reference to published data and current guidelines [6]. The team also explained that his risk was likely to be higher than that reported for routine ERCP because of his severe spinal deformity and anticipated airway difficulty. PTBD was discussed as a potentially safer but less definitive alternative for stone clearance, as it could provide biliary decompression without necessarily removing the common bile duct stone. These risks, benefits, alternatives, and contingency plans were also provided in written form as part of the informed consent process. After discussing the risks, alternatives, and uncertainty involved, the patient and his family chose to proceed with ERCP. The final decision was made only after the multidisciplinary team determined that the airway could be secured and that the procedural risks could be reduced to an acceptable level.

Physical examination revealed severely limited cervical spine mobility and markedly reduced mouth opening of approximately two fingerbreadths, findings consistent with long-standing AS that significantly restricted conventional airway management and endoscopic positioning (Fig. 1). These anatomical limitations were discussed by the multidisciplinary team during procedural planning.

During the procedure, fiberoptic bronchoscopy-guided awake transnasal intubation was successfully per-

Fig. 2. Temporary height adjustment during airway management and endoscopic retrograde cholangiopancreatography (ERCP). (a) Awake fiberoptic transnasal intubation was performed with temporary height adjustment using a step stool to maintain airway access under restricted positioning conditions. (b) Duodenal papilla cannulation during ERCP was performed with temporary height adjustment using a step stool because of fixed spinal deformity and procedural height limitations.

formed to secure the airway. Because of the patient's severe spinal deformity and the fixed height of the endoscopy platform, a temporary height adjustment with a step stool was used to maintain airway access and stable control of the anaesthesia circuit during intubation (Fig. 2a). A similar adjustment was required during cannulation of the duodenal papilla (Fig. 2b). Before use, the step stool was checked for stability and positioned on a dry, level floor; a member of the team remained beside the operator during the relevant steps. A medical student from Peking Union Medical College observed the case during clinical attachment, including the multidisciplinary discussions and procedure.

ERCP was completed successfully without complications, and a 1.0-cm black oval stone was removed from the common bile duct (Fig. 3). The gallbladder was preserved, and cholecystectomy was not needed. Follow-up abdominal ultrasonography revealed no residual gallbladder stones. The procedure was performed in February 2024, and biliary function remained normal through February 2026, with no recurrence of cholangitis.

3. Discussion

Acute cholangitis in patients with ankylosing spondylitis can present significant procedural challenges. Severe spinal rigidity, cervical deformity, and restricted mouth opening may complicate both airway management and endoscopic access, making ERCP technically demanding in such patients [3,4]. In these situations, percutaneous transhepatic biliary drainage (PTBD) is sometimes considered as an alternative strategy when endoscopic intervention is deemed high risk. However, although PTBD can provide biliary decompression and may be safer in selected high-risk patients, it does not necessarily achieve definitive stone clearance [1,2]. In the present case, although PTBD had been recommended at another institution, multidisciplinary evaluation supported an attempt at ERCP to pursue definitive treatment while maintaining procedural safety. This decision therefore required careful balancing of procedural risk against the potential benefit of complete biliary clearance. The challenge in this case was not technical difficulty alone but deciding whether the potential benefit of definitive treatment justified the additional risk.

The central ethical difficulty in this case was not whether the patient wished to undergo ERCP but whether the team could responsibly offer ERCP despite the increased anaesthetic and technical risks. Although the patient expressed a clear preference for definitive treatment,

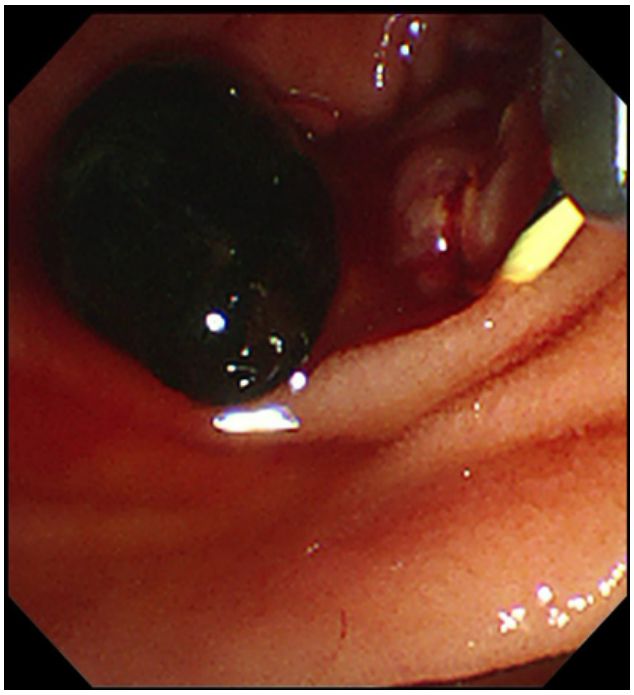

Fig. 3. Endoscopic view of a common bile duct stone. Endoscopic view showing a 1.0-cm black oval stone removed from the common bile duct.

that preference could not by itself justify proceeding with ERCP. The key question for the team was whether the potential benefit of definitive stone removal justified the additional risk. This assessment required consideration of several factors, including the feasibility of airway management, the availability of PTBD as a safer but less definitive alternative, and the existence of contingency plans should ERCP or airway management prove unsuccessful. Only after this assessment could the patient's preferences be incorporated into shared decision-making.

This decision-making process may be understood through two complementary frameworks: Elwyn's three-talk model for shared decision-making and Jonsen's four-box approach for clinical ethics [7,8,9]. In this case, PTBD and ERCP were identified as reasonable options; their risks and benefits were discussed with the patient and family, and a final decision was reached only after the team judged that ERCP could be offered within an acceptable safety margin. The case can also be considered using the four-box framework, particularly in balancing medical indications, patient preferences, and contextual factors [9].

Beyond its ethical dimensions, the case also had educational value. A medical student undergoing clinical attachment observed the multidisciplinary discussions, informed consent process, procedural preparation, and ERCP itself. In addition to the technical aspects of the procedure, the student observed how risks, alternatives, and procedural uncertainty were discussed before the intervention. Such bedside learning complements formal teaching because difficult clinical decisions often require physicians to balance procedural risk, patient preference, and professional responsibility [10,11,12]. In this case, the team had to consider whether the potential benefit of definitive stone removal justified the increased anaesthetic and procedural risks, whether PTBD should be preferred as a safer alternative, and whether those risks could be reduced to an acceptable level. These are questions that are difficult to answer using textbooks alone but are frequently encountered in clinical practice. In contemporary healthcare settings, concerns about complications and medical liability may sometimes encourage the use of defensive medicine. However, this case illustrates that avoiding intervention is not always the most appropriate response. The challenge is to determine whether a procedure can be offered safely and whether its expected benefits justify the risk. This reflects the practical application of the Hippocratic tradition, which emphasizes balancing potential benefits against avoidable harm while maintaining professional judgement [13,14]. In the present case, definitive stone removal offered potential clinical benefit but was associated with increased anaesthetic and technical risks [15,16,17].

In this case, trust was relevant, but its ethical role was supportive rather than determinative. A patient's confidence in clinicians may facilitate communication and help the patient express preferences more openly, but it must not lead clinicians to overstate benefits, minimize risks, or proceed without independent professional judgement. When a patient accepts a high-risk procedure because of confidence in the medical team, the team has a particular responsibility to confirm understanding, discuss alternatives, and clarify that declining the procedure or choosing a less invasive option remains acceptable. ERCP was therefore offered only after the multidisciplinary team judged that the risk could be reduced to an acceptable level, discussed PTBD as an alternative, and confirmed that the patient and family understood the uncertainty involved. The ethical lesson of this case is that trust can support shared decision-making, but it must be protected by clear information, realistic risk assessment, and professional restraint.

4. Conclusion

This case illustrates that managing a high-risk procedure in a patient with severe anatomical limitations requires more than technical expertise. The decision to proceed with ERCP was reached only after the multidisciplinary team independently assessed the risks, considered the available alternatives, and ensured that the patient was fully informed. This process demonstrates that trust and open communication, while valuable, must be grounded in rigorous professional judgement rather than substituted for it. From a medical education perspective, the case offers a concrete example of how ethical reasoning, multidisciplinary collaboration, and shared decision-making can be taught alongside procedural skills, helping future clinicians learn to navigate

the tension between patient autonomy, procedural risk, and professional responsibility in complex clinical situations.

Key Points

• In high-risk procedural care, physician professionalism, patient trust, and shared decision-making are all important, but patients' preferences should be incorporated only after independent professional assessment of feasibility and acceptable risk.

• Multidisciplinary collaboration is essential for balancing procedural risk, patient benefit, available alternatives, and contingency planning in complex clinical situations.

• Bedside observation of complex clinical decision-making can help medical trainees understand how ethical reasoning, patient autonomy, and professional responsibility are applied in real-world practice.

Availability of Data and Materials

The data presented in this study are available upon request from the corresponding authors. The data are not publicly available due to privacy restrictions.

Author Contributions

Conceptualization, XY, KH, QJ and DW; investigation, LG, XL, HX and JW; data curation, RL, LB and JL; writing—original draft preparation, XY and KH; supervision, KH, QJ and DW; project administration, QJ and DW; and funding acquisition, DW. All authors contributed to revising the manuscript critically for important intellectual content. All authors read and approved the final manuscript. All authors have participated sufficiently in the work and agreed to be accountable for all aspects of the work.

Ethics Approval and Consent to Participate

The study was conducted in accordance with the Declaration of Helsinki. This case report was approved by the institutional ethics committee of Peking Union Medical College Hospital (Ethics Approval Number: K5268). Written informed consent for publication of the clinical information and accompanying images was obtained from the patient. Permission for publication of the identifiable medical staff images shown in Fig. 2 was also obtained from the relevant medical staff.

Acknowledgment

The authors would like to thank Dr. Tao Wang and Dr. Yabing Wang for their invaluable advice in the preparation of this manuscript. Permission has been obtained from both individuals to be acknowledged.

Funding

This study was financially supported by the National High Level Hospital Clinical Research Funding (2025-PUMCH-C-048); the National Key Research and Development Program of China (2024YFA0918504); and the Science and Technology Projects of the Xizang Autonomous Region, China (XZ202501JD0021).

Conflicts of Interest

Given their roles as Associate Editor (Dong Wu) and Editorial Board Member (Kun He), both had no involvement in the peer-review of this article and have no access to information regarding its peer-review. Full responsibility for the editorial process for this article was delegated to John Alcolado. The other authors declare no conflicts of interest.

Declaration of AI and AI-Assisted Technologies in the Writing Process

During the preparation of this work, the authors used ChatGPT-5 to check for spelling and grammatical errors. After using this tool, the authors reviewed and edited the content as needed and took full responsibility for the content of the publication.

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