It is not clear whether the transcystic approach (LTCE) is superior to the trans-choledochal one (LCD) in the management of choledocholithiasis

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Context: It is not clear whether the transcystic approach (LTCE) is superior to the trans-choledochal one (LCD) in the management of choledocholithiasis.

Objective: To provide a quantitative comparison for the success rate as a primary outcome and complications related to them as secondary outcomes.

Data Sources: A systematic search was conducted using multiple online databases. The search was not constrained. Inception of the protocol started November 2016 and updated search was conducted in May 2017.

Study selection: Studies that compared success rate of LTCE to LCD in patients with choledocholithiasis and met our PICO criteria were included.

Data Extraction and Synthesis: The process followed the PRISMA guidelines and multiple independent reviewers contributed on a cloud-based platform. Random-effects model was used to calculate the OR or the mean difference (MD) with 95% CI. A priori hypothesis was generated based on clinical experience that LTCE is as successful as the LCD.

Results: The meta-analysis included 25 studies involving 4229 patients. The LCD achieved higher duct clearance rate compared with the LTCE approach (OR 0.352, 95 % CI 0.282, 0.439). LCD was associated with a longer operative time (MD = -0.69, 95 % CI -1.10, -0.28), higher bile leak (OR = 0.458, 95 % CI 0.226, 0.928), and hospital stay (MD = -0.69, 95 % CI -1.10, -0.28). There was no statistically significant difference in conversion rate, stricture formation or re-intervention.

Conclusions: LCD has a higher rate of successful duct clearance, associated with a longer operative time, hospital stay, and higher bile leak rate.

Biography
Irfan Ahmed is a Consultant Surgeon specialized in complex liver, pancreas and bile duct diseases with a special interest in advanced laparoscopic surgical techniques and the development of modern surgical innovations. He is a faculty for various international courses and teaches advanced laparoscopic skills to the surgeons and is also involved in developing tele-medicine and tele-mentoring for young surgeons using modern technologies. He has received a number of awards throughout his career including 5 medals, merit scholarships and various presentation awards on national and international forums. He has completed his MD at the University of Leeds working with an internationally renowned team researching organ preservation and did pioneering work on cold liver preservation techniques, while developing a novel liver preservation solution. He works at the University of Aberdeen as a Senior Lecturer and Clinical Tutor at the University of Edinburgh. He is also a Visiting Professor in Robert Gordon University and part of court of examiners for the Royal College of Surgeons of England and Joint Committee of Intercollegiate Examinations in UK.

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