

SpyGlass™ DS cholangioscopy under conscious sedation for treatment of difficult stones – a Norwich Experience

KS. Kok, H. Laxaman, S. Mogan

Department of Gastroenterology, Norfolk and Norwich University Hospital, Colney Lane, NR4 7UY

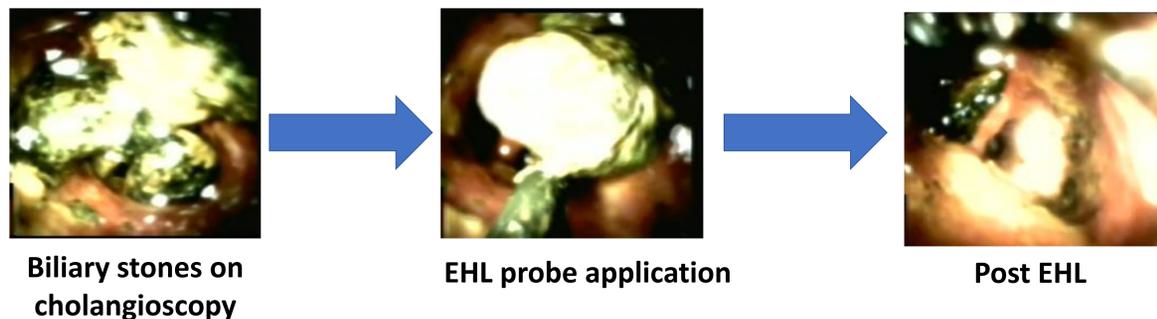
BACKGROUND

- The use of Per Oral Cholangioscopy (POC) and subsequent Electrohydraulic Lithotripsy (EHL) under direct visualisation provides a useful adjunct to treat difficult biliary stones when conventional ERCP methods have failed¹
- Because of the length and complexity of these cases, a general anaesthetic is often the preferred choice of sedation
- We describe our early experience of using the single operator SpyGlass™ DS cholangioscopy system (Boston Scientific, Marlborough, MA, USA) in a tertiary centre to treat difficult biliary stones in a single session under conscious sedation

AIM and METHODS

Aim	To retrospectively evaluate efficacy and safety of performing POC to treat biliary stones under conscious sedation
Setting	Norfolk and Norwich University Hospital NHS Foundation Trust
Time Period	September 2016 to December 2017
Outcomes	Sedation use, success of procedure and 30-day post-procedure complications were recorded

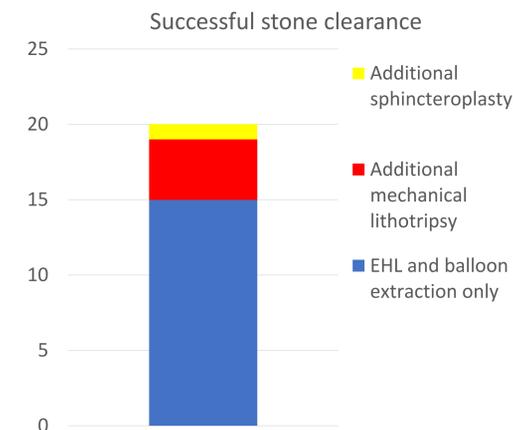
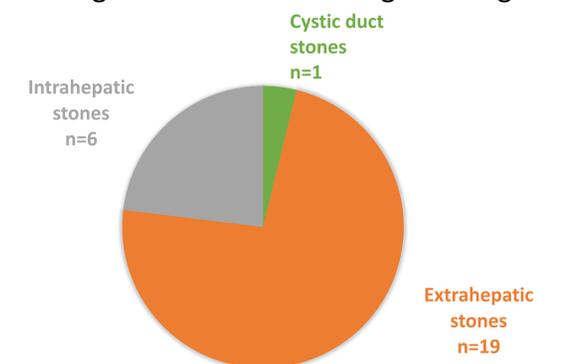
- Cases included local and tertiary referrals
- Cases performed under general anaesthesia were excluded
- All patients received preprocedural prophylactic intravenous antibiotics (usually Ciprofloxacin 400mg) and 5 days of oral antibiotics post procedure
- All patients received rectal NSAIDs post procedure



RESULTS

26 POC cases performed under conscious sedation, including one referral from neighbouring hospital

No. of cases	26
Median Age, years old, (range)	77 (60-95)
Median number of previous ERCPs, (range)	2 (0-11)
Median dose of Pethidine, (range)	50mg (0-125)
Median dose of Midazolam, (range)	4mg (2-9)



- Successful stone clearance achieved in 20/26 cases (76%)
- No patient required administration of reversal agents such as naloxone or flumazenil
- No complications such as pancreatitis, cholangitis, perforation, bleeding or death related to the procedure was recorded

Intended therapy not achieved in 6/26 cases

- Partial stone clearance cases (n=3) - 1 patient had a successful repeat procedure, other 2 are awaiting repeat procedures
- Technical difficulty (n=2) - inability to apply EHL probe to second order ducts
- Equipment failure (n=1)

CONCLUSION

- Our data of performing POC and subsequent EHL for biliary stones under conscious sedation has shown similar success rates in single-session stone clearance and safety comparable to published outcomes of cases performed under general anaesthesia^{2,3}
- Conscious sedation for POC remains a viable option, especially in an increasingly high-risk anaesthetic population and where a dedicated anaesthetist is not readily available for such cases

References

- Brewer-Gutierrez OJ, Bekkali NLH, Rajiman I, et al. Efficacy and Safety of Digital Single-Operator Cholangioscopy for Difficult Biliary Stones. Clin Gastroenterol Hepatol. 2017 Oct 24 In press.
- Lekharaju VPK, Noorullah O, Kumar M, et al. PTH-066 Cholangioscopy-Assisted Electrohydraulic Lithotripsy is Highly Effective in the Management of Difficult Bile Duct Stones. Gut 2013; 62:A238.
- Laleman W, Verraes K, Van Steenberghe W, et al. Usefulness of the single-operator cholangioscopy system SpyGlass in biliary disease: a single-centre prospective cohort study and aggregated review. Surg Endosc. 2017; 31:2223-2232.

For contact/collaboration:
sathis.mogan@nnuh.nhs.uk

Norfolk and Norwich University Hospitals



NHS Foundation Trust

Presenter Declarations

This presenter has the following declarations of relationship with industry:
• NONE