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Digital Single-Operator Cholangioscopy in the Management of Biliary Strictures – Our Initial Institutional Experience

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Abstract

Background: Biliary strictures (BSs) often represent a diagnostic challenge when evaluated with conventional endoscopic techniques. Many recent studies have focused on the specificity, sensitivity and accuracy of digital single-operator cholangioscopy (DSOC) in cases of BSs. However, DSOC is not a standardized procedure and the institutional experience with DSOC when used in different settings can provide important information.

Methods: This is prospective study of consecutive patients undergoing DSOC from March 2016 until March 2018. The aims of the study were to evaluate the role of DSOC for: (a) adequate visualization de of the target lesion and collection of biopsy samples adequate for histological evaluation and/or (b) traversing the BS under DSOC guidance when this was not possible under fluoroscopy. in addition we investigated thepossible influence of previous stenting on the cholangioscopic image and histology.

Results: Data on 44 consecutive DSOCs on 40 patients (median age 64.53 years, 24 male, 16 female) with BSs were collected All the tissue specimens were adequate for histological evaluation. The sensitivity of the cholangioscopic image was 100% (95% CI, 82.4%-100%) and the specificity is 88.9% (95% CI, 51.8%- 99.7%). The sensitivity of DSOC-guided biopsies was 62.5% (95% CI, 35.4%-84.8%) and the specificity was 100% (95% CI, 59.0%-100%). There was no influence of previous stenting on the visual aspect and on the histological result ($p<0.05$). The procedure was successful in all the cases where DSOC was used for guide wire stricture cannulation. Adverse events occurred in 6.8%.

Conclusion: DSOC is successful in most cases and has high diagnostic yield with relatively low rate of adverse events.

Key words: cholangioscopy, digital single-operator cholangioscopy, indeterminate biliary strictures, adverse events