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## **Single Operator Pancreatoscopy in the Evaluation & Treatment of Pancreatic Disease**

M F Catalano, M Lee, N M Guda, R Gamarra, J E Geenen

Chronic Pancreatitis (CP) is an irreversible often progressive fibrotic/inflammatory disorder & results in exocrine & endocrine insufficiency. Abdominal pain is the most disabling symptom in patients with CP & is due to obstruction of the main pancreatic duct (MPD) (stones (STO) or strictures( STX)). Removal of STO & dilation of STX is believed to improve pain. Adenocarcinoma (ACA) of the pancreas is increased in CP particularly in those with documented MPD STX. Endoscopic extraction of STO is often challenging with limited success using available accessories (balloons, baskets & mechanical lithotripsy). Further, dilated MPD with or w/o STX can present a difficult challenge differentiating CP from malignant or pre-malignant lesions. Recently, a single operator duodenoscope assisted cholangiopancreatoscope (SODAC) (Spyglass, Boston Scientific) has become available. This is a 10fr catheter system with dual channel for both fiberoptic bundle & a 2nd channel for additional accessories. This later accessory allows for advancement of a lithotripsy probe for STO fragmentation under direct view or biopsy forceps for accurate tissue sampling.

AIM:

1. Determine effectiveness of EHL of MPD STO using the new SODAC.
2. Determine the ability to differentiate CP from malignant/pre-malignant conditions causing MPD STX.

#### METHOD I:

- During 7/07 – 11/08, data on all patients undergoing SODAC were reviewed.
- All underwent standard ERCP under GA.
- Cannulation was achieved using a 0.021 guidewire.
- Over the wire the SODAC system was advanced into the MPD.

#### METHOD II:

- Once in the MPD, area of interest was targeted (STO, STX), the EHL probe was advanced via accessory channel & following contact with the STO(s), lithotripsy was performed.
- Subsequent duct clearance was attempted using standard technique (basket, balloon).
- Repeat ERCP was performed until complete duct clearance was achieved.
- For STX, biopsy forceps (Mighty Bite) were advanced under direct view.

## RESULT I:

- Pancreatic SODAC was performed in 21 patients (12 M, 9 W).
- 15 patients had CP with MPD STO.
- 14/15 had successful EHL. A total of 52 (28EHL) ERCP were performed to achieve duct clearance.

## RESULTS II:

- Complete duct clearance was achieved in 12, partial 2, none 1.
- 3 patients with MPD STX underwent SODAC with directed biopsy with 1/3 demonstrating ACA.
- Finally, 3 patients with MPD dilation (>6mm) underwent SODAC with 2/3 demonstrating IPMT lesions.

| N  | CP Etiology |       | Duct Stones |     |    | Stone Size (mm) |    | Treatment |     |    | # ERCP     | Success |      |      |
|----|-------------|-------|-------------|-----|----|-----------------|----|-----------|-----|----|------------|---------|------|------|
|    | ETOH        | Other | 1-2         | 3-5 | >5 | ≤ 5             | >5 | ES        | DIL | ST |            | Comp    | Part | None |
| 15 | 10          | 5     | 3           | 7   | 5  | 6               | 9  | 14        | 4   | 15 | 1-10 (3.4) | 12      | 2    | 1    |

## CONCLUSION:

- Direct view of PD STO using the new SODAC system facilitates STO fragmentation & clearance.
- It allows improved targeting of MPD pathology to accurately diagnose frankly malignant or pre-malignant pancreatic lesions.