Endoscopic Ultrasound (EUS) Functionality for a Standard Upper Endoscope: Initial US Experience

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BACKGROUND & AIM

- EUS is a valuable tool to evaluate lesions of the luminal gastrointestinal tract and adjacent structures, like the pancreas.
- Historically, EUS cases were primarily done at the hospital due to equipment cost, procedure length, need for on-site cytology, and higher level of anesthesia support.
- A novel technology allows for conversion of a conventional endoscope or colonoscope to become an EUS scope without need of significant capital investment. The aim of this study is to demonstrate the efficiency of n EUS attachment to conventional scope in initial US cohort.

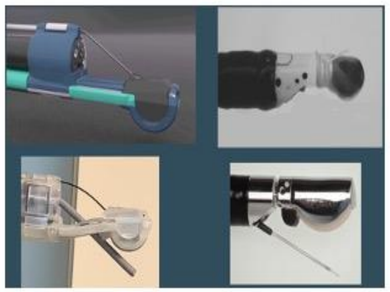
METHODS

- Patients being referred for EUS evaluation had their exams with EUS converted scope (EndoSound Vision System, EndoSound, Inc. Portland, OR).
- A reusable EUS transducer is fitted on the tip of the endoscope. Data collection included demographics, procedure indication, and technical success.

RESULTS

- A total of 61 patients were included in this retrospective analysis. The average age was 56 years old with 52.5% being females.
- The most common indication was evaluation of pancreas cysts (table 1). 90% of cases were deemed clinically acceptable meaning the procedure was able to be completed.
- The main limitation was the ability to advance the scope to the second portion of the duodenum as a result of navigation issues, but improved with physician experience.
- The success rate for targets involving the esophagus, stomach, and duodenal bulb was 100%. Fourteen patients required FNA or FNB (8 pancreatic cysts, 4 pancreatic masses, 1 liver met, 1 gastric mass) and sampling was 100% successful to achieve a diagnosis. No adverse events reported. See Figure 1.

Figure 1. EUS converted scope with EUS image



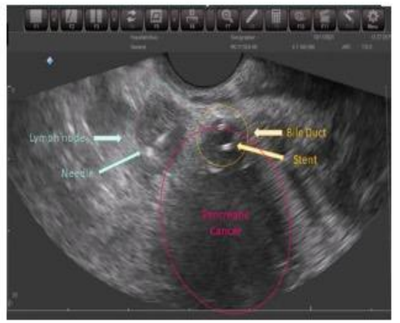


Table 1: Indications	
Pancreas Cysts	14
Submucosal Lesion evaluation	10
Pancreas Cancer Screening	9
Pancreatitis	5
Pancreas mass	4
Cancer Staging	3
CBD Stone evaluation	2
Other (ex. abdominal pain, r/o gallstones)	14
	Total: 61

DISCUSSION

- The EUS procedure is a routine procedure used in daily endoscopic practice.
- This study demonstrates this novel EUS system with the ability to convert a traditional endoscope is both safe and clinically effective.
- The platform allows for both diagnostic and therapeutic applications. This has the potential to improve patient access for those needing EUS evaluation.
- Future studies are needed to build on this initial positive experience.