

## EUS-FNA: Wet Suction Technique



CASE PRESENTED BY:

**BRIAN RAJCA, M.D.**

Associates in Digestive Health  
Cape Coral Hospital  
Cape Coral, Florida, USA

### BACKGROUND

Endoscopic ultrasound-guided fine-needle aspiration (EUS-FNA) has been widely utilized to diagnose a range of gastrointestinal diseases.<sup>(1,2)</sup> The literature surrounding EUS-guided FNA techniques generally involves the use of a needle, with or without suction, or a slow-pulling technique with the stylet<sup>(3,4,5)</sup>. Despite a number of articles on FNA techniques<sup>(1-5)</sup>, the optimal technique of EUS-guided sampling for pathologic diagnosis has not been clearly established in the literature.

Recently, Attam and colleagues published a study on the novel technique using wet suction (also known as a hybrid technique) versus conventional air suction when sampling solid lesions. The aim of the study was to detect an improvement in the quality of specimen obtained during FNA with the wet suction technique compared to a stylet based technique<sup>(1)</sup>. The results of this prospective, randomized study yielded statistically significant improvement not only in cellularity but also an increase in specimen adequacy from 75.2% to 85.5% ( $p=0.035$ ). Further follow-up studies have been suggested to compare the wet suction technique with different needle sizes and also to involve pathologic grading of the FNA specimen.

### CASE REPORT

We report a case of a 77-year-old patient who presented with obstructive jaundice secondary to a distal bile duct stricture. Due to the concern of a pancreatic head mass on imaging, an EUS was performed which confirmed a 2.1 cm by 1.9 cm hypoechoic mass in the head of the pancreas. A 22 gauge Expect™ Slimline was chosen for the FNA and a novel “hybrid wet suction” technique was utilized for the first time at this institution. In preparation for the FNA, the stylet was removed and 5 cc of saline was used to prime the 22 gauge FNA needle. A vacuum syringe was then set at 20cc with the lure lock in the closed position. The saline syringe was removed and the closed vacuum syringe attached to the FNA needle. Using

standard techniques, the pancreatic mass was accessed and suction was turned on. Using ultrasound guidance in an avascular plane the needle (**Figure 1**) was actuated 10 to 12 times in 2 to 3 different planes to achieve adequate fanning through the mass. Throughout the pass, clear saline could be seen collecting in the vacuum syringe suggesting adequate tissue was being obtained. When the pass was complete, suction was turned off and the needle withdrawn. This process was repeated and a total of four passes were made.

### SLIDE AND CELL BLOCK PREPARATION

To prepare the slides, a drop of aspirate was expressed onto a slide and fixed with 95% alcohol for Papanicolaou stain. The remainder of the aspirate was expressed into a formalin bottle for preparation of the cell block. Any visible core was removed from the slide using a “needle tip” and placed into formalin for the cell block.

### PATHOLOGY RESULTS

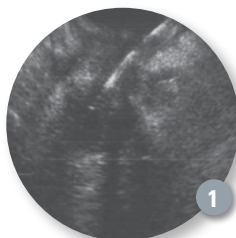
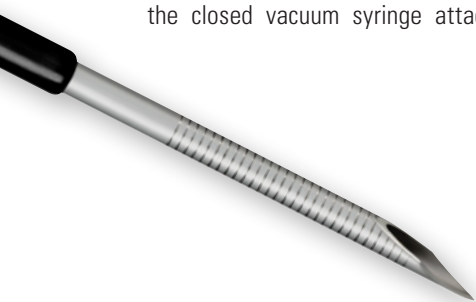
**DIAGNOSIS:** Pancreas, mass, fine needle aspiration: Positive for adenocarcinoma (see comment).

**COMMENT:** Intradepartmental consultation obtained with agreement.

**MICROSCOPIC EXAMINATION:** A microscopic examination was performed to render the above diagnosis.

### IMPLICATIONS FOR FNA SAMPLING

**The “hybrid wet suction” technique can be easily introduced as a new method for FNA in the community setting.** The technique was successful and produced a positive diagnosis of pancreatic adenocarcinoma. The patient was brought back for an ERCP and a palliative WallFlex™ Biliary Stent (**Figure 2**). Getting a quick and accurate diagnosis can expedite the management of patients with advanced biliary disease.



#### References:

<sup>1</sup>Attam, R, Arain M.A., Bloechl S.J., et al. “Wet suction technique (WEST)”: a novel way to enhance the quality of EUS-FNA aspirate. Results of a prospective, single-blind, randomized, controlled trial using a 22-gauge needle for EUS-FNA of solid lesions. *Gastrointest Endosc.* 2015; 81(6): 1401–1407.

<sup>2</sup>Wallace, Michael B. et al. Randomized controlled trial of EUS-guided fine needle aspiration techniques for the detection of malignant lymphadenopathy. *Gastrointest Endosc.* 2001; 54(4): 441–447

<sup>3</sup>Puri, R., Vilmann, P., Saftoiu, A. et al. Randomized controlled trial of endoscopic ultrasound-guided fine-needle sampling with or without suction for better cytological diagnosis. *Scand J Gastroenterol.* 2009; 44: 499–504.

<sup>4</sup>Lee, J.K., Choi, J.H., Lee, K.H. et al. A prospective, comparative trial to optimize sampling techniques in EUS-guided FNA of solid pancreatic masses. *Gastrointest Endosc.* 2013; 77: 745–751.

<sup>5</sup>Nakai, Y., Isayama, H., Chang, K.J. et al. Slow pull versus suction in endoscopic ultrasound-guided fine-needle aspiration of pancreatic solid masses. *Dig Dis Sci.* 2014; 59: 1578–1585.

**Warning:** The safety and effectiveness of the WallFlex Biliary RX Stent for use in the vascular system has not been established.

ACCESS magazine was produced in cooperation with several physicians. The procedures discussed in this document are those of the physicians and do not necessarily reflect the opinions, policies or recommendations of Boston Scientific Corporation or any of its employees.

Results from case studies are not predictive of results in other cases. Results in other cases may vary.

Indications, Contraindications, Warnings and Instructions for Use can be found in the product labelling supplied with each device.

**CAUTION:** Federal (U.S.) law restricts this device to sale by or on the order of a physician.

**CAUTION:** The law restricts these devices to sale by or on the order of a physician. Information for the use only in countries with applicable health authority product registrations. Information is not intended for distribution in France.

All trademarks are the property of their respective owners.

© 2015 Boston Scientific Corporation or its affiliates. All rights reserved.

ENDO-337712-AA September 2015