EUS-FNA: Wet Suction Technique

BACKGROUND

Endoscopic ultrasound-guided fine-needle aspiration (EUS-FNA) has been widely utilized to diagnose a range of gastrointestinal diseases.\(^1\)\(^,\)\(^2\) 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 (3, 4, 5). Despite a number of articles on FNA techniques (1-5), 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 (5). 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 hypoechogenic 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 The saline syringe was removed and the needle withdrawn. This process was repeated and a total of four passes were made.

The “hybrid wet suction“ technique can be easily introduced 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.

MICROSCOPIC EXAMINATION

A microscopic examination was performed to render the above diagnosis and cell block. A microscopic examination was performed to render the above diagnosis. 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:


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

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