Endoscopic ultrasound-guided fine-needle aspiration: Getting to the point

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Endoscopic ultrasound (EUS)-guided fine-needle aspiration (FNA) is arguably the cornerstone of the on-going popularity of EUS. The ability to safely and reliably obtain cytological or histological proof of malignancy; or to reliably exclude malignancy in indeterminate lesions is clinically extremely useful — particularly when lesions are otherwise inaccessible.

In expert hands, the sensitivity of EUS-FNA for malignancy is over 90% (higher for nodes, lower for pancreatic malignancies).[1] Can we improve on these results? Can less experienced endosonographers be as effective? Finding the best and simplest technique could answer both questions.

Most studies on EUS-FNA have focused on comparing variables such as needle sizes, needle type, suction, stylet use, on site cytological analysis, number of passes, etc. These studies seem to ignore the fact that the primary goal of the EUS-FNA technique is to effectively position the FNA needle into the target lesion and then move the needle to collect tumor cells. After all, if the needle does not come in contact with the tumor, it does not matter what other variable you change, there can be no diagnosis of cancer. In other words, these studies ignore what, in practice, is likely the most important variable in EUS-FNA — how and where the EUS-FNA needle is positioned and moved within the target lesion. It is well-known that what appears as a "mass" or malignant node may contain only a small focus of tumor. The rest may be inflammation or necrosis. The only study that compared wide tissue sampling ("fanning") to regular sampling showed a clear advantage to fanning and a yield after the first pass that was comparable to the results in most other studies after multiple passes.[2]

All this is to say that maybe we should be focusing on what is happening at the point of the needle, rather than at the other end! Is it possible that proper technique can overcome all other variables? The current literature does not allow us to answer this question because great majority of papers never describe the needle path (whether the entire lesion traversed, what part of the lesion was sampled) or if fanning was used or not.

Every "expert" believes that his or her technique is best and they are very resistant to change. In our experience, we are able to obtain a sensitivity of 90% with only 2 passes, with no stylet, no suction and no cytologist.[3] How is this possible? We believe that it is because we use an aggressive multi-pass fanning technique. Our simplified technique requires less nursing support and is faster and safer (due to no risk of needle stick injury during re-insertion of the stylet). If this basic technique does not work, we may try to use a "salvage" maneuver by adding suction or perhaps trying a different needle type (such a needle with a side hole). Anecdotally, we find this is rarely helpful.

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All this is to say that there may be many different variables that need to be taken into account maximize the results of EUS-FNA, or maybe just one variable: The endosonographer — because that is the one variable that controls how the needle is used. If this is the case, could training be more important that hardware?

In this issue of EUS, we hope to offer a balanced and detailed assessment of as many issues related to maximizing the yield of EUS-FNA; as well maximizing its effectiveness. I would like to sincerely thank our international panel of experts for their thoughtful contributions.

REFERENCES

1. Madhoun MF, Wani SB, Rastogi A, *et al*. The diagnostic accuracy of 22-gauge and 25-gauge needles in endoscopic ultrasound-guided fine needle aspiration of solid pancreatic lesions: A meta-analysis. *Endoscopy* 2013:45;86-92.
2. Bang JY, Magee SH, Ramesh J, *et al*. Randomized trial comparing fanning with standard technique for endoscopic ultrasound-guided fine-needle aspiration of solid pancreatic mass lesions. *Endoscopy* 2013:45;445-50.
3. Sahai AV, Paquin SC, Gariépy G. A prospective comparison of endoscopic ultrasound-guided fine needle aspiration results obtained in the same lesion, with and without the needle style. *Endoscopy* 2010:42;900-3.

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