The resectable pancreatic lesion: To FNA or not to FNA? A diagnostic dilemma, FNA cons

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Endoscopic ultrasound-guided fine-needle aspiration (EUS-FNA) is generally safe and very effective, but there are risks. When the risks outweigh the benefits, fine-needle aspiration (FNA) should not be performed. However, as such cases are rare, true FNA "cons" are rare.

The best way to reduce the risk of EUS-FNA complications is to not perform EUS-FNA. FNA should never be performed unless there is a reasonable expectation that the information provided will truly help improve patient management. Paradoxically, FNA results positive for malignancy are not universally helpful while those negative for malignancy or not universally unhelpful. Whatever the results, FNA-related complications in cases where the information was unlikely to be helpful to begin with, may be hard to justify medicolegally.

The most common risks directly attributable to EUS-guided punctures are bleeding, pancreatitis, and infection (primarily of cystic lesions). These occur in <2% of cases.[1] To some extent, the frequency can likely be reduced with an improved EUS technique, such as avoiding vessels, reducing the number of passes, and avoiding traversing large areas of normal pancreas. The utility of EUS-cyst fluid analysis for cystic lesions is debatable in many cases. If a cyst puncture is considered essential, it is probably best to never puncture a cyst more than once with the same needle and to administer prophylactic antibiotics before and/or after the procedure.

Another less obvious risk is that of incorrect EUS-FNA results (false positive and false negative). False positives are out of the control of the endosonographer and can have a serious adverse clinical impact, as they are usually discovered after surgery, usually unnecessarily, because the pathological study of the surgical specimen shows no evidence of malignancy. The impact of a false negative can usually be minimized by repeating the EUS-FNA when clinical suspicion of malignancy remains high, despite initial negative results.

The risk of these complications is so low that it is not worth considering if there is a reasonable suspicion of pancreatic cancer. However, if the suspicion for cancer is relatively low, the risks may be unjustified. It is particularly important to avoid biopsy of low-suspicion lesions in the recent acute pancreatitis since these may represent poorly organized cysts or necrosis, which are at risk for infection, or well-encapsulated, microcystic lesions, which are usually typical for benign serous

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cystadenomas and are also at risk for FNA-induced infections.

Perhaps, the most serious complication of EUS-FNA is tumor seeding during the trans-gastric EUS-FNA of pancreatic body lesions. It is very rare, but it does occur.[2-4] The data from underpowered retrospective studies showing no influence of EUS-FNA on survival or peritoneal failure do not prove that tumor seeding is of no consequence since there are several well-documented cases in the literature.[5,6] Tumor seeding can turn a potentially curable T1 lesion into a locally advanced T4 or metastatic M1 lesion. Therefore, the risks of tumor seeding may contraindicate EUS-FNA for very suspicious, clearly resectable pancreatic body lesions.

EUS-FNA is a powerful, effective, and generally extremely safe tool. There are few reasons to not perform EUS-FNA in suspicious lesions. However, for less suspicious lesions or for highly suspected, resectable body lesions, serious consideration should be given as to whether the risks outweigh any potential benefits.

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