MINI REVIEW

The Significance of Repeatedly Performing Endoscopic Ultrasound-Guided Fine Needle Aspirations to Detect Suspected Pancreatic Cancer

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ABSTRACT

Even with advances in technology, it is still hard to distinguish between benign and malignant pancreatic tumours only from photographs. Endoscopic ultrasound-guided fine needle aspiration (EUS-FNA), a treatment with good accuracy and a low complication rate, is the method of choice for tissue collection to discriminate pancreatic lesions. In a meta-analysis, the combined sensitivity and specificity of EUS-FNA for determining the cause of solid pancreatic mass were 86.8% and 95.8%, respectively. Although patients with suspected pancreatic cancer demonstrate great diagnosis accuracy with EUS-FNA, the incidence of collecting ambiguous cytologic results is still up to 10.9%. When cytology from a EUS-FNA is inconclusive yet malignancy is highly suspected in the clinical presentation, an endosonographer has challenges.

INTRODUCTION

Endosonographers may receive nondiagnostic EUS-FNA findings, despite the fact that EUS is a very safe, accurate, and minimally invasive technology for tissue diagnosis. A cytopathologist analyses the sample after acquiring the specimen by EUS-FNA and categorises it as insufficient, benign/reactive, unusual, suspicious, and/or malignant. Inconclusive findings and diagnostic mistakes, such as false positives and false negatives, are issues with EUS-FNA. The causes of such issues arise from a variety of conditions, including puncture failure, puncture success but insufficient sample material, and puncture success but appropriate sample material but no cancer was detected by cytology [1].

There are several choices. First and foremost, serial imaging can be used for follow-up and clinical evaluation. But this makes them extremely anxious. According to one study, 30% of individuals with negative or nondiagnostic EUS-FNA results went on to receive a pancreatic cancer diagnosis at a later time. In such case, lymphadenopathy or vascular invasion were apparent EUS indicators of malignancy. Careful short-term follow-up with EUS or other imaging modalities is exceedingly dangerous when pancreatic cancer is clinically suspected. Then, chemoradiation treatment without a confirmed tissue diagnosis or surgical investigation with blind pancreatic resection may be a possibility [2]. However, there could be some medical-legal issues.

Therefore, the best course of action for the patient should be explored when endosonographers have negative or nondiagnostic EUS-FNA results although pancreatic cancer is clinically highly suspect. To get tissue for diagnosis, alternative diagnostic techniques such bile duct brushing with Endoscopic Retrograde Cholangiopancreatography (ERCP) or Computed Tomography (CT)-guided biopsy would be used. However, ERCP with brushing has the danger of intraperitoneal dissemination and CT-guided biopsy carries the risk of postprocedural complications such pancreatitis. One research investigated several techniques that can be used to sample tissue when pancreatic cancer is suspected. Low sensitivity was seen in the ERCP after brushing, and a high risk of complications was seen in the surgical biopsy.

Lesion, apparatus, endosonographer, and cytopathologist are EUS-FNA components. We can predict different outcomes from repeated EUS-FNA if we can alter one of its components.

Location, features, and size of the lesion are all variables that might affect the outcome of an EUS-FNA. In comparison to the mediastinum, the pancreatic body and tail are not thought to be simple to locate. Even more challenging areas are the pancreatic head and uncinate.

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Even if we cannot change the lesion's position, occasionally it is preferable to access the pancreatic head via the stomach as opposed to the duodenum in order to get the best outcomes. Another crucial element is the lesion's characteristics. It is challenging to obtain a reliable result from an EUS-FNA if the mass has significant necrosis or a history of background pancreatitis [3].

A substantial clinical impact was seen in 63% of the patients when EUS was repeated for a comparable clinical reason at a tertiary-referral facility. 72% of patients who underwent repeated EUS at the same facility with different purposes had their future care strategy changed [4,5]. 16 These findings suggest that a second EUS-FNA conducted by a skilled professional at a different facility or by the same endosonographer in a new situation may provide positive results, much as a colonoscopy or ERCP may be successful when performed on a failed surgery.

CONCLUSION

Repeating the EUS-FNA is a logical option. Repeated EUS-FNA has a minimal risk but significant clinical impact. When the initial EUS-FNA test of a suspected tumour is nondiagnostic, repeating EUS-FNA might be helpful in clinical practise. Repeat EUS-FNA should be taken into consideration, especially if malignancy predictions such lymphadenopathy or vascular invasion are noticeable on the EUS.

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