

Endoscopic Ultrasound in Rectal Pathology: an Emerging Role

Ramy El-Hendawy

Tropical Medicine Department, Faculty of Medicine, Zagazig University

Mobile:
+201013655005

E mail:
ramyelhendawy86@gmail.com

Key words:
Endoscopic
ultrasound; Rectum;
elastography; Anal
Sphincter

Endoscopic ultrasound (EUS) represents a valuable imaging modality for digestive diseases, with a wide range of diagnostic and therapeutic applications for gastrointestinal (GI) and pancreaticobiliary diseases. It allows for detailed imaging of the gastrointestinal (GI) tract and adjacent structures using sound waves and allows for sampling of tissue with fine needle aspiration (FNA) or fine needle biopsy (FNB), so it may trigger changes to both patients' diagnosis and management, displaying a considerable impact upon clinical decision [1].

Several additional techniques have been developed in recent years for enhanced imaging with EUS, including contrast enhancement, elastography, and three-dimensional reconstructions. Such techniques can provide a better characterization of lesions and improve diagnostic accuracy while possibly diminishing the operator dependency of EUS [2].

Rectal EUS is indicated to stage rectal cancer by clarifying depth of invasion, involvement of adjacent structures, and presence of lymph nodes, but magnetic resonance imaging (MRI) is the recommended modality unless there is a contraindication [3].

EUS is also used to assess for vascular lesions, primarily rectal varices. Anal EUS can be used to clarify the extent of anal sphincter injury. Finally, EUS is used to assess for perianal, perirectal, and pelvic disease in IBD and can be used to follow response to therapy. EUS-guided therapeutics including abdominopelvic fluid collection

drainage, fiducial placement, rectal varix treatment, and targeted microbubble drug delivery are available in varying degrees and have been evaluated in retrospective case series [4].

In the current issue of Afro-Egyptian Journal of Infectious and Endemic Diseases (AJIED) Mahran et al [5], discussed the role of EUS in diagnosis of rectal and perianal lesions. This study is one of few studies that focused on the role of EUS in evaluation of rectal and perirectal lesions and its ability to detect malignancy in such lesions depending on its high resolution imaging, elastography and EUS-FNA with its great benefit in tissue acquisition for histopathological evaluation.

Collection and analysis of the pre-procedure data regarding imaging and colonoscopy added a benefit to the study in making comparisons of the diagnostic yield of each modality.

EUS elastography is a noninvasive method for assessment of tissue stiffness and malignant transformation that was applied to all the patients with promising results in malignancy detection.

It was better to mention the nature of the lesions missed by the colonoscopy and CT in order to be focused on in other studies.

Surprisingly, the validity of EUS alone without FNA in diagnosis of malignancy was 100% the same as EUS-FNA and it is known that the malignant features during EUS exam are not so accurate and are operator dependent.

Actually, further studies on larger sample size are needed to evaluate the benefit of rectal EUS with inclusion of more variety of lesions such as rectal varices, IBD, peri-anal fistulae and solitary rectal ulcers.

REFERENCES

1. Chong AK, Caddy GR, Desmond PV, Chen RY. Prospective study of the clinical impact of EUS. *Gastrointest Endosc.* 2005;62:399–405.
2. Fusaroli P, Saftoiu A, Mancino MG, Caletti G, Eloubeidi MA. Techniques of image enhancement in EUS (with videos) *Gastrointest Endosc.* 2011;74:645–655.
3. Cartana ET, Gheonea DI, Saftoiu A. Advances in endoscopic ultrasound imaging of colorectal diseases. *World J Gastroenterol.* 2016; 22(5): 1756–66.
4. Benson AB 3rd, Venook AP, Al-Hawary MM, Cederquist L, Chen YJ, Ciombor KK, et al. Rectal Cancer, version 2.2018, NCCN clinical practice guidelines in oncology. *J Natl Compr Cancer Netw.* 2018;16(7):874–901.
5. Mahran, Z., Kamel, S., Okasha, H., Ashmawy, A., Ezz-Eldin, M. Role of Endoscopic Ultrasound in Diagnosis of Rectal and Perirectal Lesions. *Afro-Egyptian Journal of Infectious and Endemic Diseases*, 2022;12(1):75-84.