



EUS-FNA of 2 right atrial masses

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EUS-FNA has spread worldwide because of its accuracy and safety profile in avoiding intervening vessels. Nonetheless, EUS-guided procedures on the vascular system, mainly regarding gastric varices therapy, have been increasingly reported.¹ However, few EUS-guided cardiac

interventions have been published²⁻⁶ because potential risks of hemorrhage, infection, and arrhythmias exist. Tamponade, arrhythmias, pneumothorax, valve damage, and embolization have been reported after transvascular biopsies.⁷ Cardiac EUS-FNA has theoretic advantages over

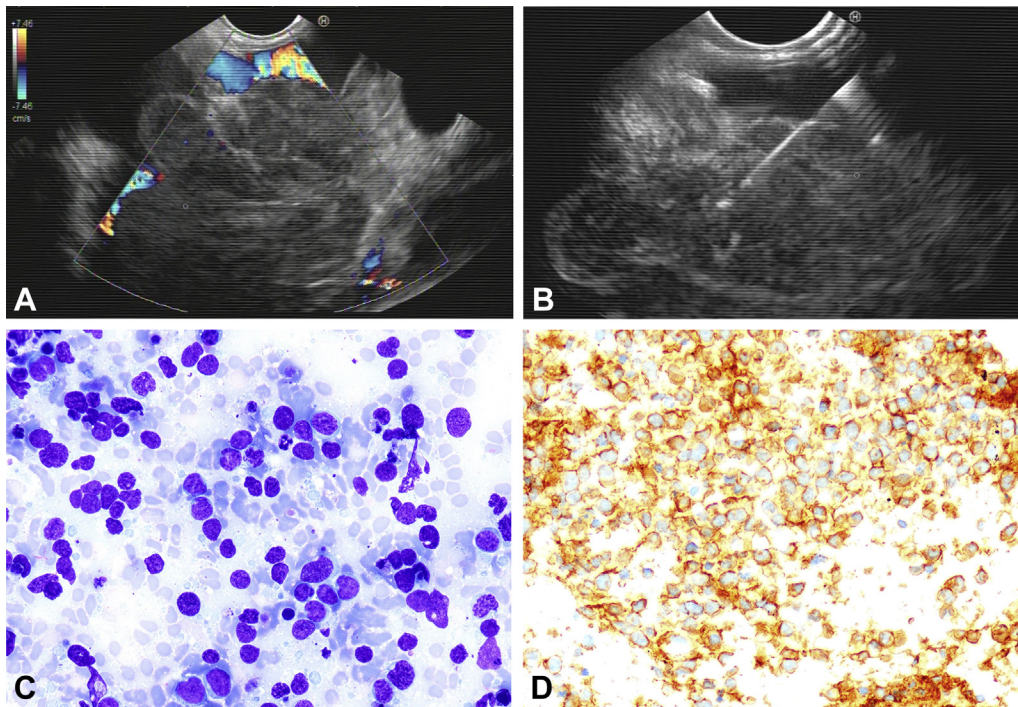


Figure 1. **A**, Color Doppler EUS view showing a mass occupying most of the right atrium. **B**, 25-gauge needle transversing the left atrium and puncturing the right atrium mass. **C**, Proliferation of large neoplastic cells of lymphoid strain (FNA; Giemsa stain, orig. mag. $\times 40$). **D**, Positive immunostain for CD20 antibody (peroxidase-antiperoxidase method, orig. mag. $\times 20$).

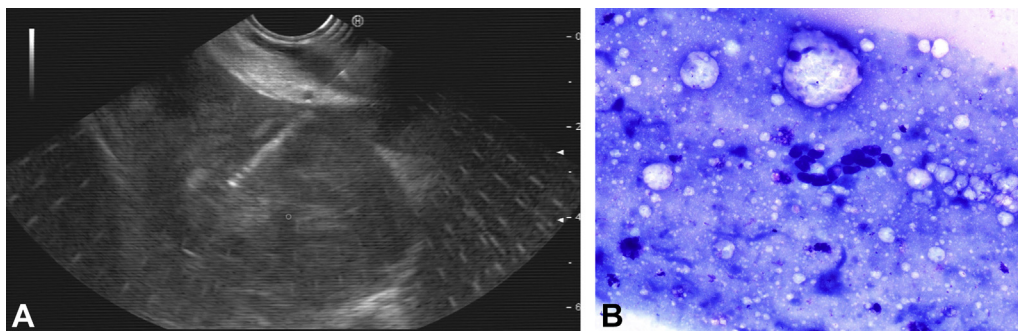


Figure 2. **A**, EUS-FNA of right atrium mass with 25-gauge needle. **B**, Scarce spindle cells on a myxoid background. (FNA; Giemsa stain, orig. mag. $\times 40$).

transvascular biopsies of easy and real-time targeting of the lesion, avoidance of damage to the valves or the coronary artery during the puncture, the advantage of faster performance, and elimination of the need for fluoroscopy.

We report on 2 cases of EUS-FNA of right atrial masses with the use of 25-gauge needles (Cook, Limerick, Ireland), with rapid on-site evaluation by a cytopathologist (Video 1, available online at www.VideoGIE.org). Written informed consent was previously obtained from the patients.

The procedures were performed in the endoscopy suite, and deep sedation was administered by an anesthesiologist without endotracheal intubation. Two cardiologists were present, and the cardiovascular surgeons were on stand-by. The working channel of the echoendoscope was flushed with povidone-iodine solution, and a short course of antibiotics was given after the procedure. The punctures were performed at a right angle to the esophageal wall, transversing the pericardium and the left atrium. Torque and up-and-down movements were avoided to minimize the risk of tearing the esophageal and cardiac walls. EUS images after the puncture did not show pericardial effusion or intracavitary bleeding, and patients were sent to the postanesthesia care unit. No adverse events were observed.

Patient 1 was a 62-year-old woman who was admitted for congestive cardiac failure. An 8-cm right atrial mass partially obstructing the inferior vena cava was observed. An intravascular biopsy was not feasible. EUS-FNA was performed in 1 pass after anticoagulant therapy was withdrawn (Fig. 1A and B). The cytologic and microhistologic examinations showed a large B-cell non-Hodgkin malignant lymphoma (Fig. 1C) and positivity for CD20 antibody (Fig. 1D). Chemotherapy was started and was followed by an initial response and tumor size reduction. The patient died of agranulocytosis and pneumonia 4 months later.

Patient 2 was a 31-year-old man who was admitted for dyspnea and hemoptysis. A right atrium mass was observed. An intravascular biopsy was unsuccessful. EUS-FNA required 3 passes (Fig. 2A). The last cytologic smear

showed nonatypical fusiform cells embedded in a myxoid background, suggesting atrial myxoma (Fig. 2B). The patient was considered unfit for surgery and died 4 months later due to pulmonary embolism.

In these 2 cases, EUS-FNA of the right atrium was safe, even after performing 3 passes in the second patient, helping in the clinical decision-making algorithm.

DISCLOSURE

All authors disclosed no financial relationships relevant to this publication.

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<https://doi.org/10.1016/j.vgie.2019.03.013>
