

Factors Influencing Endoscopic Ultrasound Guided Fine Needle Aspiration Results of Gastrointestinal Submucosal Lesions

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Introduction: Follicular cell-derived carcinomas of the thyroid gland comprise a heterogeneous group of malignant neoplasms of the thyroid gland with varied histologic appearance and molecular profiles. Fine-needle aspiration is considered an essential tool for the diagnosis of suspicious thyroid nodules.

Case: A 71 year-old female patient with a history of multiple myeloma underwent a magnetic resonance imaging (MR) for the evaluation of neck pain and cough. MR revealed a 41 mm x 28 mm lobulated soft tissue lesion with homogeneous contrast enhancement at the superior mediastinum, posterior of trachea. The lesion could not be separated from the right lobe of the thyroid gland and the signal intensity was similar to the thyroid gland's signal. Given the fact that the fat plane between the trachea and esophagus was lost, the patient was referred for endosonographic evaluation.

The upper endoscopy revealed normal esophageal mucosa without any submucosal lesions or extrinsic compression. Radial endosonographic evaluation revealed an upper mediastinal (18-20 cm from incisors), well-demarcated, homogeneously hypoechoic solid lesion (28 mm x 35 mm). The lesion was out of the esophagus. The echo-texture was similar to the thyroid gland's echo-texture. The elastrographic evaluation of the lesion revealed a yellow-green heterogenous pattern, with a 1.5 strain ratio. Doppler was used to avoid vascular structures. The cytologic evaluation of the sample obtained with a 25 ga needle revealed follicular (hurtle cell) thyroid neoplasia. Immunohistochemical evaluation confirmed the diagnosis.

Conclusion: EUS-FNA is a safe tool that can be used for detection and diagnosis of primary and metastatic thyroid lesions.

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