Sufficiency of Tissue Sampling with Core Needle Biopsy in Thyroid Nodules

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Abstract body: Thyroid nodules are relatively common problem in middle aged women. The first and most used invasive method is fine needle aspiration and cytology. The shortcoming of this method is relatively high insufficiency of sampling for assessment and judgment. The alternative minimally invasive method is core needle biopsy [CNB] that under sonographic guidance could yield sufficient tissue samples for assessment and diagnosis. In this research, we have assessed a group of patients with thyroid nodules that underwent CNB of thyroid nodules. We have presented the rate of sufficiency of CNB for proper histologic assessment to make a diagnosis and also the rate of complications.Totally 64 patients with 81 thyroid nodules were enrolled in the study. All the patients were referred by endocrinologists and the indication of sampling was made by them. The criteria for selecting the nodule for biopsy were size greater than 7 mm or presence of sonographic features suggestive of malignancy including hypervascularity, hypoechoic condition, vertical position, microlobulation, microcalcification and ill-defined borders. If the patient had multiple nodules, nodules suggestive for malignancy based on the aforementioned criteria were biopsied. All of patients underwent CNB under the sonography guidance using color Doppler findings for better navigation of needle to avoid vascular damage. We used the 18 G needles [9 mm length]. After procedure the patient compress the site of biopsy for 15 minutes. All of the patients were carefully observed for 1 hour to watch any probable complications such as hematoma and vascular damage, tracheal and esophageal problems and etc. The mean age of patients was 51.1±13.9 years (23-84). Totally 55 patients were female (85.9%) Among all 81 CNBs, 78 yielded sufficient data for assessment and judgment (96.3%). The diagnoses were nodular goiter in 33 lesions (40.7%), benign thyroid follicles in 26 lesions (33.3%), papillary carcinoma in 4 (4.9%), hurtle cell neoplasm in 3 (3.7%), follicular carcinoma in 3 (3.7%), lymphocytic thyroiditis in 5 (6.2%), and hashimoto thyroiditis in 3 (3.7%). Among all of the patients, only one patient developed hematoma that was controlled by conservative managements.Finally it is concluded that core needle biopsy under sonography and color Doppler guidance is a very safe and efficient minimally invasive procedure that could yield sufficient histologic samples for assessment.

Disclosure: Nothing to disclose