

Accuracy of Color Doppler ultrasound compared with Elastography in the diagnosis of Malignancy of thyroid nodules with suspicious FNAB

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Abstract:

Introduction:

Thyroid nodules over 50% of the population over age 50 are included in only 5% of thyroid nodules are malignant. The aim of this study was compare the accuracy of ultrasonography with Elastograohy in the diagnosis of malignancy of thyroid nodules with suspicious FNAB.

Methods:

In a cross-sectional and descriptive-analytical study that performed in Surgery department of Tabriz University of Medical Sciences on patients with thyroid nodules, accuracy of ultrasonography with Elastography in the diagnosis of malignancy of thyroid nodules with suspicious FNAB evaluated.

Results:

In this study, 445 patients (637 nodules) with thyroid nodules were examined among these patients, 107 patients (161 nodules) with suspicious FNAB were selected and evaluated.

15(14%) of patients were male and 92(86%) of them female. Mean age of male patients was 50.55 ± 11.80 year and mean age of female patients was 43.91 ± 12.95 year ($P=0.044$).

Thyroid nodules echogenicity by sonography were hypo echo in 15(52.8%) cases and in 13(47.2%) of cases was mixed.

In 97(60.2%) of thyroid nodules elasticity was below 2.9 and in 64(39.8%) of cases elasticity was more than 2.9.

Thyroid nodules pathology in 15(52.8%) was malignant and in 13(47.2%) was benign.

Conclusion:

Considering the elasticity of nodules ≥ 2.9 as malignant nodules, sensitivity and specificity of Elastography in the diagnosis of thyroid nodules were 51.11% and 76.31% respectively. PPV and NPV of elastography for the diagnosis of thyroid nodules were 71.88% and 59.8%, respectively.

Sensitivity, specificity, PPV and NPV of color Doppler((Prominent peripheral ring (hallo))) in the diagnosis of thyroid nodules Malignancy were 51.11%, 55.26%, 76.31% and 55.9%, respectively.

Considering the Hypo echo taking nodules as malignant nodules, the sensitivity and specificity of ultrasonography in the diagnosis of thyroid

nodules were 73.52% and 59.21%, respectively. PPV and NPV of ultrasound in the diagnosis of thyroid nodules were 73.52% and 59.21%, respectively.

Key words:

Thyroid nodules Sonography, Elastography