Thyroid Nodule Assessment: Role of EU-TIRADS and Fine Needle Aspiration

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INTRODUCTION

❖ Thyroid nodules (TNs) are the most frequent endocrine disorder.

❖ The results of thyroid FNA (Fine Needle Aspiration) and ultrasonography USG can help determine the risk of malignancy in a thyroid nodule and guide further management .

Material and Methods

❖ Retrospective study involving 76 patients who underwent surgery for TN (2018–2023) . All of the patients underwent an ultrasound/EU–TIRADS classification .

❖ Thyroid FNA was conducted on 31 patients, leading to six groups based on current recommendations (Bethesda 2018).

❖ FNA and sonography findings were compared with the histopathological analysis after surgery.

RESULTS

EUTIRADS CLASSIFICATI	Number of nodules	Benign	Malignant	Sensitivity	Specificity
EUTIRADS 2	9	8	1	100%	88;9%
EUTIRADS 3	38	31	7	100%	81,6%
EUTIRADS 4	26	18	8	100%	69,2%
EUTIRADS 5	3	0	3	100%	100%
TOTAL	76	57	19		

➢ Mean age of patients was 45.9 years .
➢ The majority of patients were female (70 women VS 6 men)
➢ Of the malignant neoplasms, papillary thyroid carcinoma was the most common(13/19).

❖ Cytologies suspicious of malignancy and malignant included papillary carcinoma in 5 cases and medullary carcinoma in 1 case, confirmed by histology.
❖ All 11 non diagnostic cytologies were benign.
❖ The 9 benign cytologies corresponded to adenoma (macro or microvesicular) in 8 cases, and a vesicular carcinoma in 1 case.
❖ For the 5 cases of atypia, the final histological examination was benign in 4 cases with one being positive for papillary carcinoma.. The sensitivity was 88%, and the specificity was 67%.
❖ The positive predictive value was 64%, and the negative predictive value was 89%.

DISCUSSION / CONCLUSION

❖ The most common classification system is the Thyroid Imaging Reporting and Data System (TI-RADS) which was established to improve inter-observer reproducibility and to facilitate communication between medical physicians.
❖ EU–TIRADS classification alongside FNA is helpful for the initial assessment of the thyroid lesion malignancy risk, demonstrating high sensitivity .