

Fine-needle aspiration of thyroid nodules: correlation between cytology and histology and evaluation of discrepant cases.

Background: The purpose of this study was to evaluate the results of thyroid fine-needle aspiration (FNA) and to determine the reasons for the discrepancies between the cytologic and histologic diagnoses.

Methods: The authors evaluated the cytologic and histologic results of 133 FNAs obtained from 92 patients who underwent subsequent thyroidectomies.

Results: The initial cytologic results were indeterminate in 39 of 133 cases (29%) because a neoplasm could not be ruled out. These cases corresponded histologically to 9 adenomatoid nodules (ANs), 14 follicular adenomas (FAs), and 16 malignant thyroid neoplasms. The reported FNA diagnoses of the remaining 94 cases (71%) were 48 ANs, 19 follicular neoplasms (FNs), 21 papillary carcinomas (PCs), and 6 cases of Hashimoto's thyroiditis (HT). Correlation of cytology and histology showed that 69 of 94 FNA results (73%) correlated with the histologic diagnoses, whereas 25 (27%) were discrepant. The discrepancies resulted from cytodiagnostic errors in 13 cases (52%), suboptimal smears in 11 (44%), and an FNA sampling error in 1 (4%). The false-negative rate of FNA was 19% and the false-positive rate was 6%.

Conclusions: Diagnostic pitfalls and indeterminate FNA diagnoses were predominantly due to overlapping cytologic criteria between ANs, FNs, and follicular variants of PCs. Rendering a definite diagnosis on suboptimal FNA samples is also a significant source of pitfalls.

Sidawy, M.K., DelVecchio, D.M., and **Knoll, S.M.** Fine-Needle Aspiration of Thyroid Nodules- Correlation between Cytology and Histology and Evaluation of Discrepant Cases *Cancer Cytopath* 1997; 81(4): 253-259