ABSTRACT

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Interobserver Agreement in Interpreting Thyroid FNA with a Diagnosis of Atypia/Follicular Lesion of Undetermined Significance (FLUS/AUS)

BACKGROUND

The Bethesda System for Reporting Thyroid Cytopathology (BSRTC) was developed to refine definitions and improve clinical communication and management. However, the diagnostic category of atypia/follicular lesion of undetermined significance (FLUS/AUS) remains heterogeneous in terms of usage and clinical outcome. Because of the “gray zone” that exists in the interpretation of thyroid FNA demonstrating minor architectural and/or cytologic atypia, this study was undertaken to evaluate the degree of interobserver agreement in the evaluation of thyroid FNAs originally interpreted as FLUS/AUS.

DESIGN

Twenty-three thyroid FNAs including 18 cases originally diagnosed as FLUS/AUS, 2 as negative for malignancy, 2 as positive for malignancy, and 1 as follicular neoplasm were selected. Two representative slides from each case were reviewed independently by 13 cytopathologists with varying number of years of experience of the observers. Each reviewer was asked to evaluate each case using the BSRTC. The kappa statistics was calculated.

RESULTS

The observer diagnoses using the BSRTC are shown in Table 1. All were in complete agreement: one originally interpreted as negative and one as positive for malignancy; both cases were confirmed on histology. Table 2 shows the comparison of rates of FLUS/AUS diagnoses made by observers based on 18 cases with original diagnoses of FLUS/AUS. There was no 100% agreement of FLUS/AUS for any of the cases. There was a majority agreement (among 8 or more observers) in 6 cases: one originally diagnosed as positive, one as negative, and 4 as FLUS/AUS. Both positive and negative cases were confirmed on histology: among the 4 FLUS/AUS, 2 were found to be negative and 2 follicular adenoma on histology. For the entire group of reviewers, the mean kappa statistic was 0.34±0.13. The mean kappa statistic was 0.42±0.07 for the reviewers of the same institution and 0.29±0.14 among reviewers from different institutions.

CONCLUSIONS

The interobserver agreement for thyroid FNA cases originally classified as FLUS/AUS was poor among academic cytopathologists. It appeared that the interobserver agreement was better among cytopathologists who were from the same institution.

REFERENCES