THE ROLE OF REPEAT FINE NEEDLE ASPIRATION CYTOLOGY IN IMPROVING THE DIAGNOSTIC ACCURACY OF THYROID MASSES

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OTOLARYNGOLOGY

BACKGROUND: Fine needle aspiration (FNA) is important for diagnosing thyroid nodules. The Bethesda System is most widely used for reporting FNA cytology. A repeat FNA (rFNA) is recommended if initial results are *non-diagnostic* (category I) or *atypia / follicular lesion of undetermined significance* (A/FLUS; category III) as per Bethesda. It is unclear how often rFNA provides additional diagnostic information, and thus we investigated its utility.

METHODS: A retrospective chart review was performed of patients at the QEII who had an initial category I or III FNA and subsequently underwent rFNA of the same nodule. We collected data on initial FNA and rFNA results, demographics, surgery rates, and final pathology results. rFNA results were compared to published values.

RESULTS: A total of 237 patients (474 FNAs) were included. Initial FNAs were either non-diagnostic (82%), or A/FLUS (18%). rFNA yielded a new category approximately 60% of the time. However, 60% of nodules remained indeterminate following rFNA. Approximately one quarter (27%) of patients had surgery after rFNA; of those 68% had category I or III rFNA cytology. Overall, pathology was malignant in 37% indeterminate rFNA cases that underwent surgery.

CONCLUSION: At our institution, rFNA for category I and III nodules provides a definitive diagnosis in 40% of cases, which is important for patient counseling and expectation management. Surgical pathology following category I or III rFNA is malignant in 37% of cases. This rate is higher than is predicted by the Bethesda system (1-4% and 5-15%, respectively). It is important that the management of indeterminate nodules is based on institution specific malignancy rates, not solely on literature schemes.