

RECENT EXPERIENCE WITH PREOPERATIVE FINE NEEDLE ASPIRATION BIOPSY OF THYROID NODULES IN A COMMUNITY PROGRAM

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Background: Fine needle aspiration biopsy (FNA) has been used increasingly in the assessment and management of patients with thyroid nodules. Its acceptance has been slower in many community hospitals than in tertiary endocrine referral centers because reliable FNA requires expert cytopathologic assistance. We correlated preoperative FNA findings with postoperative histopathology to define the diagnostic accuracy and clinical utility of FNA in a community hospital setting.

Methods: FNA cytopathologic and final pathologic reports of all patients who underwent thyroidectomy at a community teaching hospital between March 1995 and March 2000 were analyzed to correlate post-thyroidectomy histopathologic and preoperative FNA cytopathologic findings.

Results: 281 partial or complete thyroidectomies were performed. 182 patients had a preoperative FNA and thyroid cancer was confirmed following thyroidectomy in 69 (38%) of them. FNA diagnostic of papillary carcinoma was reported in 28 patients with a predictive accuracy of 93%. FNA reports "suspicious" for papillary carcinoma" in 14 patients correlated with malignancy in 57% of patients. "Indeterminate follicular neoplasm" reported on FNA in 60 patients correlated with malignancy in 30% of patients, of whom 89% had papillary carcinoma (mainly follicular variant papillary carcinoma) and only 11% had follicular carcinoma. "Indeterminate Hürthle cell neoplasm" reported in 20 patients correlated with malignancy in 35% of patients. "Atypical cell clusters" reported in 5 patients and "Findings consistent with benign adenoma" in 4 patients in neither case correlated with any malignancy. "Benign" FNA findings in 40 patients who underwent thyroidectomy for other clinical features of their nodules correlated with malignancy in 20% of patients (5 of 8 patients had microcarcinoma < 1 cm). 18% of 11 patients who underwent thyroidectomy for "insufficient numbers of cells" after repeated FNA attempts had a carcinoma (2 of 2 patients had microcarcinoma < 1 cm). Nodule size with "indeterminate follicular neoplasm" reported on FNA analysis did not correlate with probability of malignancy and intraoperative frozen section analysis of such lesions was frequently inconclusive.

Conclusions: Accuracy of FNA analysis of thyroid nodules in a community hospital setting is comparable to results reported by major endocrine referral centers. Indeterminate findings of follicular neoplasm were the commonest FNA indication for thyroidectomy and correlated with the presence of differentiated thyroid cancers in 30% of patients.

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