

HEMITHYROIDECTOMY: THE PREFERRED INITIAL SURGICAL APPROACH FOR MANAGEMENT OF THE 'HURTHLE CELL NEOPLASM'

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Background: The optimal surgical approach for management of individuals presenting with nodular thyroid disease diagnosed as a 'Hurthle cell neoplasm' (HN) by fine needle aspiration biopsy (FNAB) is currently unknown. The purpose of this study was to evaluate various clinicopathologic characteristics and their cancer-risk in order to determine a logical approach for the surgical management of individuals diagnosed with a HN by thyroid cytology.

Methods: All cytologic diagnoses of HN were identified from a prospectively maintained database of 422 primary thyroidectomies carried out at a tertiary referral endocrine surgical center over a 52-month period. All pathology and cytology was retrospectively evaluated. Patient clinicopathologic characteristics evaluated included age, sex, tumor size, and ipsilateral lobe nodularity. Their association with outcomes was evaluated with the Fisher's exact test and t-test.

Results: Of the 422 patients undergoing thyroidectomy, 27 presented with a FNAB diagnosis of HN. On final pathology 7 HN patients (25.9%) had a cancer diagnosis. The cancer diagnoses of the HN patients were: Hurthle cell carcinoma (3 patients) and papillary carcinoma (4 patients). Though none of the clinicopathologic characteristics evaluated were able to differentiate benign from malignant tumors, large tumor size and male sex were significantly associated with a pathologic diagnosis of Hurthle cell carcinoma ($p < 0.05$).

Conclusions: The thyroid of only a small proportion of individuals with an initial FNAB diagnosis of a HN will, by final pathologic evaluation, be found to harbor a clinically significant malignancy. These results suggest hemithyroidectomy represents the initial preferred surgical approach for the management of individuals presenting with nodular thyroid disease and a cytologic diagnosis of HN.