

DETECTING AND DEFINING HYPOTHYROIDISM AFTER HEMITHYROIDECTOMY

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Background: Uncertainty remains regarding the incidence and clinical importance of hypothyroidism following hemithyroidectomy for benign thyroid disease. The purpose of this study was to elucidate an appropriate schedule for postoperative follow up and to determine whether histologic lymphocytic infiltration impacts the timing of follow up investigations.

Methods: A retrospective chart review of patients undergoing hemithyroidectomy from 2001 to January 2004 was performed. The incidence of postoperative hypothyroidism was determined based upon serum TSH and clinical symptoms. The time course used to assess post operative thyroid function and the impact upon treatment was evaluated. The relationship between postoperative hypothyroidism and histologic lymphocytic infiltration in the removed gland was investigated. Stepwise logistic regression was employed for predictor selecting and model fitting.

Results: Twelve out of 66 patients (18.1%) became biochemically hypothyroid during postoperative follow up. Four of the 12 patients (33.3%) subsequently became euthyroid without any intervention, 6 patients were started on thyroxine and 2 patients were left untreated with elevated TSH. Of the 8 patients who were treated for or remained hypothyroid, 4 (50%) had significant lymphocytic infiltration in the resected gland. Excluding the 4 patients who developed transient hypothyroidism, 10 of 54 remaining patients (18.5%) had lymphocytic infiltrate. Logistic regression showed that both lymphocytic infiltrate and age are associated with the development of hypothyroidism but neither is an independent predictor.

Conclusions: Although the incidence of hypothyroidism following hemithyroidectomy remains low, it is not insignificant. When considering treatment for a patient with elevated TSH it is important to evaluate whether the patient has symptoms and the time that has elapsed since the surgery. Most patients who become hypothyroid will do so within the first six months, however in the absence of overt symptoms, some patients will become euthyroid without intervention. The impact of lymphocytic infiltrate on hypothyroidism is age dependent. In patients with lymphocytic infiltrate, the younger the patient the more likely they will develop hypothyroidism. In those without lymphocytic infiltrate, the older the patient the more likely they will develop hypothyroidism.