

## **CLINICAL IMPLICATION OF CANCER ADHESION IN PAPILLARY THYROID CARCINOMA: CLINICOPATHOLOGIC CHARACTERISTICS AND PROGNOSIS ANALYZED WITH DEGREE OF EXTRATHYROIDAL EXTENSION**

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**Background/Purpose:** Macroscopic extrathyroidal extension (ETE) is a poor prognostic factor in papillary thyroid carcinoma (PTC). However, intra-operative inspection of ETE is often inaccurate and could misconstrue simple adhesion as gross ETE. This confusion could result in more aggressive treatment. In this study, we investigated the frequency and clinical implication of simple adhesions.

**Methods:** We identified 858 patients who underwent total thyroidectomy for PTC. Clinicopathologic features, prognosis and stimulated serum thyroglobulin (Tg) levels were compared between four groups divided by degree of ETE: no ETE (n = 335), simple adhesion (n = 16), microscopic ETE (n = 378), and macroscopic ETE (n = 129).

**Results:** In the total of 145 cases, which were recognized as gross ETE under intra-operative inspection, 16 cases (11.0%) were diagnosed as cancer confined to the thyroid without ETE by definite histology. This simple adhesion group showed no statistical differences in post-operative stimulated Tg levels with the no ETE and microscopic ETE groups ( $p > 0.05$ ). Whereas the distribution of post-operative Tg levels in the macroscopic ETE group was significantly higher than other groups ( $p < 0.001$ ). During the 54-month median follow-up period, macroscopic ETE and microscopic ETE groups showed a worse relapse free survival rate than the no ETE and simple adhesion groups ( $p < 0.05$ ).

**Discussion & Conclusion:** This study reports that the discrepancy between intra-operative inspection and definite histology is not negligible when dense adhesions are present. When no tumor is found, this inflammatory or fibrotic adhesion group has a favorable prognosis.