

Research paper 1

Is there an association between papillary thyroid carcinoma and chronic autoimmune thyroiditis? : a retrospective study

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Introduction and objectives: The link between papillary thyroid carcinoma (PTC) and chronic autoimmune thyroiditis (AIT) was first described by Dailey et al in 1955, but the association between these two diseases is still controversial. The objective of this study was to evaluate the association between PTC and chronic AIT and to compare this with the association between benign thyroid disease and AIT.

Methodology: The data of 1014 patients who had undergone thyroidectomy from 2017 to 2021 at North Colombo Teaching Hospital (NCTH) was retrospectively analyzed. Chronic AIT was diagnosed based on the presence of diffuse lymphoid aggregates with at least focal germinal center formation, follicular destruction and Hurthle cell change. Patients who were found to have malignancies other than PTC were not included in the study. The patients were divided into two groups, those having PTC and those having benign thyroid disease. The odds ratio was used in the statistical analysis to determine the difference between these two groups.

Results: The first group consisted of 282 patients who were diagnosed with PTC. Among these 282 patients, 106 patients were found to have AIT in the background thyroid tissue (37.59%). In the second group of 832 patients who did not have PTC (i.e.: benign thyroid disease), 106 patients were found to have AIT (12.74%). The odds ratio was 4.125 (95% confidence interval 3.01-5.65).

Conclusion: 37.59 % of PTC demonstrated AIT in the background thyroid tissue. The odds of PTC in the presence of chronic AITs was four times that of benign thyroid disease and the difference was statistically significant.

Keywords- autoimmune thyroiditis, papillary thyroid carcinoma, association

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