PROCEEDING

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087. Relationship Between Neutrophil-Lymphocyte Ratio and Serum Thyroid Stimulating Hormone Preoperative Thyroidectomy as Predictors of Papillary Thyroid Cancer

William Stevenson[1], Nico Lumintang[1], Sherly Tandililing[1], Windy Mariane Virenia Wariki[2]

[1]Surgery Department Head and Neck Division RSUP Prof Dr. R.D. Kandou, Manado, Indonesia
[2]Department of Community Medicine, Faculty of Medicine, Sam Ratulangi University, Manado, Indonesia.

ABSTRACT

Background: Thyroid cancer is the most common endocrine malignancy. The incidence of papillary thyroid cancer has been increasing. Early diagnosis and management are crucial for thyroid cancer. Therefore, the availability of predictive biomarkers for papillary thyroid cancer is important. This study aims to determine whether the preoperative Neutrophil-Lymphocyte Ratio (NLR) and Thyroid Stimulating Hormones (TSH) levels can be used as predictors of papillary thyroid cancer. **Methods**: Ninety-one patients with thyroid nodules who underwent thyroidectomy surgery at RSUP Prof. DR. R.D. Kandou were retrospectively analyzed. Complete blood count with differential count and serum TSH levels were taken before thyroidectomy. **Results**: The relationship between TSH levels and papillary thyroid cancer was significant, with a p-value of 0.025, sensitivity of 51.1%, and specificity of 73.9%. The relationship between NLR and papillary thyroid cancer was also significant, with a p-value of <0.001, sensitivity of 68.9%, and specificity of 100%. However, the combination of NLR and TSH did not show a synergistic effect as predictors of papillary thyroid cancer due to several unstudied factors, such as IL-6, IL-37, ROS, NO, and NK cells, which may play a role in the pathogenesis of thyroid cancer. The limitations of this study include its retrospective cross-sectional design and the lack of further investigation into other factors, such as IL-6, IL-37, ROS, NO, and NK cells, due to limited facilities and time. **Conclusion**: Both NLR and TSH can be used as predictors of papillary thyroid cancer. NLR is more potent than TSH as a predictor.

Keywords: NLR, TSH, predictors, papillary thyroid cancer