

ABSTRACT

THE RELATIONSHIP BETWEEN SERUM LEVELS OF TSH, T₃ AND T₄ WITH HISTOPATHOLOGICAL TYPE OF THYROID NEOPLASM AT GENERAL HOSPITAL Dr. H. ABDUL MOELOEK

By

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Background: Thyroid neoplasms are abnormal growths originating from the thyroid gland, which can be benign or malignant neoplasms. Thyroid neoplasms that are often found are generally benign. TSH is the primary factor controlling thyroid cell growth and thyroid hormone synthesis and secretion. TSH secretion is stimulated by low levels of T₃ and T₄. T₃ and T₄ circulating in the plasma are mostly bound to protein, and a small part is in free form, namely Free Triiodothyronine (FT₃) and Free Thyroxine (FT₄).

Method: This research was an analytic observational study with a cross-sectional approach. The research was conducted at Dr. H Abdul Moeloek Hospital. The data studied was the relationship between serum levels of TSH, T₃, and T₄ with the histopathological type of thyroid neoplasm taken from medical records. Thyroid neoplasms were grouped into follicular adenomas, papillary carcinomas, follicular carcinomas, and other neoplasms. Meanwhile, serum levels of TSH, T₃, and T₄ were grouped into low and high. Furthermore, the data were analyzed using the Chi-square test.

Result: The results of the study from 86 respondents were dominated by women as many as 69 respondents (80.2%), which were dominated by the histopathological type of follicular adenoma as many as 32 cases (37.2%) and serum TSH, T₃, and T₄ levels were low respectively as many as 58 cases (67.4%), 54 cases (32%) and 59 cases (68.6%). There was a relationship between serum TSH and T₃ levels and the histopathological type of thyroid neoplasm ($p=0.022$ and $p=0.008$) and there was no relationship between serum T₄ levels and the histopathological type of thyroid neoplasm at Dr. H. Abdul Moeloek Hospital ($p=0.054$).

Conclusion: There was a relationship between TSH and T₃ serum levels and the histopathological type of thyroid neoplasms and there was no relationship between T₄ serum levels and the histopathological type of thyroid neoplasms at Dr. H. Abdul Moeloek Hospital.

Keywords: Thyroid neoplasm, serum levels of TSH, T₃, and T₄, histopathological features

ABSTRAK

HUBUNGAN KADAR SERUM TSH, T₃ DAN T₄ DENGAN TIPE HISTOPATOLOGI NEOPLASMA TIROID DI RUMAH SAKIT UMUM DAERAH DR. H. ABDUL MOELOEK

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Latar Belakang: Neoplasma tiroid ialah pertumbuhan abnormal yang berasal dari kelenjar tiroid, dapat berupa neoplasma jinak ataupun neoplasma ganas. Neoplasma tiroid yang sering ditemukan umumnya merupakan jinak. TSH merupakan faktor primer yang mengendalikan pertumbuhan sel tiroid dan sintesis serta sekresi hormon tiroid. Sekresi TSH dirangsang oleh kadar T₃ dan T₄ yang rendah. T₃ dan T₄ yang bersirkulasi dalam plasma yang sebagian besar diikat dengan protein, dan sebagian kecil dalam bentuk bebas yaitu *Free Triiodotironine* (FT₃) dan *Free Thyroxine* (FT₄).

Metode: Penelitian ini bersifat observasional analitik dengan pendekatan potong lintang. Penelitian dilakukan di RSUD Dr. H. Abdul Moeloek. Data yang diteliti adalah hubungan antara kadar serum TSH, T₃ dan T₄ dengan tipe histopatologi neoplasma tiroid yang diambil dari rekam medik. Neoplasma tiroid dikelompokkan menjadi adenoma folikuler, karsinoma papilari, karsinoma folikuler, dan neoplasma lainnya. Sedangkan kadar serum TSH, T₃ dan T₄ dikelompokkan menjadi rendah dan tinggi. Selanjutnya data dianalisis menggunakan uji *Chi-square*.

Hasil: Hasil penelitian dari 86 responden didominasi oleh perempuan sebanyak 69 responden (80,2 %) yang didominasi oleh tipe histopatologi adenoma folikuler sebanyak 32 kasus (37,2%) dan kadar serum TSH, T₃ dan T₄ dalam kadar yang rendah masing-masing sebanyak 58 kasus (67,4 %), 54 kasus (32 %) dan 59 kasus (68,6%). Terdapat hubungan antara kadar serum TSH dan T₃ dengan tipe histopatologi neoplasma tiroid ($p= 0,022$ dan $p= 0,008$) serta tidak terdapat hubungan antara kadar serum T₄ dengan tipe histopatologi neoplasma tiroid di RSUD Dr. H. Abdul Moeloek ($p=0,054$).

Simpulan: Terdapat hubungan antara kadar serum TSH dan T₃ dengan tipe histopatologi neoplasma tiroid serta tidak terdapat hubungan antara kadar serum T₄ dengan tipe histopatologi neoplasma tiroid di RSUD Dr. H. Abdul Moeloek.

Kata Kunci: Neoplasma tiroid, kadar serum TSH, T₃ dan T₄, gambaran histopatologi