

INTISARI

HUBUNGAN KADAR *THYROID STIMULATING HORMONE RECEPTOR ANTIBODY* (TRAb) TERHADAP AKTIVITAS DAN DERAJAT KEPARAHAN KLINIS OFTALMOPATI GRAVES' DI RSUP DR. SARDJITO

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Latar Belakang: Penyakit Graves' (PG) merupakan penyakit autoimun penyebab tersering hipertiroid. *Thyroid stimulating hormone receptor antibody* (TRAb) biomarker spesifik untuk mendiagnosis PG. Oftalmopati Graves' (OG) manifestasi tersering ekstratiroid pada Graves'. Setiap OG dinilai aktivitas dan derajat keparahan klinis untuk tatalaksana.

Tujuan Penelitian: Mengetahui hubungan kadar TRAb terhadap aktivitas klinis OG klasifikasi *Clinical Activity Score* (CAS) dan derajat keparahan klinis *The European Group on Graves' Orbitopathy* (EUGOGO).

Metode Penelitian: : Penelitian *cross sectional*, berlangsung pada bulan Januari sampai dengan Agustus 2021 di RSUP Dr. Sardjito Yogyakarta. Subyek penelitian PG baru atau dalam pengobatan anti-tiroid yang memiliki gejala hipertiroid. OG menurut kriteria Bartley dan Gorman serta belum mendapatkan injeksi steroid. Pemeriksaan serum TRAb dengan metode *electrochemiluminescence immunoassay* (ECLIA). Penilaian aktivitas klinis CAS dan derajat keparahan EUGOGO. Uji analisis dengan korelasi *spearman*. Analisis multivariat dengan regresi linier dan regresi logistic.

Hasil Penelitian: 30 subyek dengan usia rerata 35.43 tahun, dominan wanita (80%), median durasi PG 13 bulan. Median TRAb 8.15 IU/L, skor median CAS 2 dengan 46.3% kondisi aktif. Derajat keparahan ringan 40% dan sedang-berat 60%. Korelasi TRAb dengan CAS ($r=0.576$, $p=0,001$), EUGOGO ($r=0.535$, $p=0,002$). Multivariat analisis TRAb dengan CAS ($B= 0.076$, $p=0,01$) sedangkan EUGOGO ($OR=1.198$, $p=0.045$).

Kesimpulan: TRAb berkorelasi positif terhadap aktivitas dan derajat keparahan klinis OG.

Kata kunci: *Thyroid stimulating hormone receptor antibody* (TRAb), Oftalmopati Graves', *Clinical Activity Score* (CAS), *The European Group on Graves' Orbitopathy* (EUGOGO).

ABSTRACT

THE RELATIONSHIP OF THYROID STIMULATING HORMONE RECEPTOR ANTIBODY (TRAb) LEVELS TO ACTIVITY AND CLINICAL SEVERITY OF GRAVES' OPTHALMOPATHY IN RSUP DR. SARDJITO

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Background: Graves' disease (GD) is an autoimmune disease that is the most common cause of hyperthyroidism. Thyroid stimulating hormone receptor antibody (TRAb) is specific biomarker for diagnosing PG. Graves' ophthalmopathy (GO) is the most common extrathyroid manifestation in Graves'. Each GO was assessed activity and clinical severity for treatment.

Objectives: To determine the relationship between TRAb levels and GO clinical activity in Clinical Activity Score (CAS) classification and clinical severity of The European Group on Graves' Orbitopathy (EUGOGO).

Methods: This is a cross sectional study, taking from January to August 2021 at RSUP Dr. Sardjito Yogyakarta. New GD subjects or on anti-thyroid medication who have symptoms of hyperthyroidism. GO according to Bartley and Gorman criteria and has not received steroid injections. Serum TRAb examination by electrochemiluminescence immunoassay (ECLIA) method. Assessment clinical activity CAS and severity EUGOGO. Test analysis with Spearman correlation. Multivariate analysis with linear regression and logistic regression

Results: 30 study subjects mean age 35.43 years, female dominant (80%), median GD duration of 13 months. Median TRAb 8.15 IU/L, median CAS score 2 with 46.3% active. Mild severity 40% and moderate-severe 60%. Correlation of TRAb with CAS ($r=0.576$, $p=0.001$), EUGOGO ($r=0.535$, $p=0.002$). Multivariate analysis of TRAb with CAS ($B=0.076$, $p=0.01$) while EUGOGO ($OR=1.198$, $p=0.045$)

Conclusion: TRAb is positively correlated with activity and clinical severity of OG.

Keywords: Thyroid stimulating hormone receptor antibody (TRAb), Graves' Ophthalmopathy, Clinical Activity Score (CAS), The European Group on Graves' Orbitopathy (EUGOGO).