

Perbandingan kadar Free Thyroxine dan Thyroid Stimulating Hormone pada berbagai derajat Melasma di RSUPN Dr. Cipto Mangunkusumo, Jakarta = The comparison between Free Thyroxine and Thyroid Stimulating Hormone Levels on Melasma Severity at Dr. Cipto Mangunkusumo National General Hospital, Jakarta

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Abstrak

Latar Belakang: Melasma merupakan bercak hiperpigmentasi yang sebagian besar terdapat pada wajah. Penelitian sebelumnya menunjukkan bahwa kadar hormon tiroid secara bermakna lebih tinggi pada pasien melasma. Akan tetapi, belum terdapat penelitian yang menjelaskan perbedaan kadar hormon tiroid pada gradasi derajat keparahan melasma.

Tujuan: Mengetahui perbandingan kadar hormone tiroid pada derajat melasma yang berbeda yaitu pada melasma ringan atau sedang-berat yang dinilai dengan mMASI dan Janus II *facial analysis system*.

Metode: Empat puluh delapan perempuan disertakan sebagai subjek penelitian potong lintang ini. Sampel dipilih menggunakan metode *consecutive sampling*. Subjek dinilai derajat keparahan melasma secara subjektif menggunakan skor mMASI di Poliklinik Kulit dan Kelamin RSUPN Cipto Mangunkusumo setelah diagnosis ditegakkan. Pemeriksaan dikonfirmasi menggunakan alat Janus II *facial analysis system* di RSPAD Gatot Subroto. Subjek penelitian kemudian diperiksa hormon tiroid FT4 dan TSH.

Hasil: Berdasarkan skor mMASI, 24 pasien (50%) didiagnosis sebagai melasma derajat ringan dan 24 pasien (50%) didiagnosis sebagai melasma derajat sedang. Sebanyak 2 pasien (4%) juga didiagnosis dengan hipertiroid subklinis dan 1 pasien (2%) didiagnosis dengan hipotiroid subklinis. Tidak ditemukan hubungan yang bermakna antara derajat melasma berdasarkan mMASI dengan kadar TSH dan FT4 serum. Pemeriksaan Janus menggunakan modalitas cahaya polarisasi memiliki korelasi positif dengan kadar FT4 serum ($r = 0,3$, $p = 0,039$) dan skor mMASI ($r = 0,314$, $p = 0,03$).

Kesimpulan: Tidak terdapat perbedaan kadar TSH serum antar berbagai derajat melasma berdasarkan penilaian mMASI dan Janus II *facial analysis system*. Kadar FT4 serum memiliki korelasi positif dengan hasil penilaian Janus II *facial analysis system* menggunakan modalitas cahaya polarisasi.

Background: Melasma is characterized by hypermelanosis manifested mostly on facial area. Previous studies have shown that thyroid hormone level was significantly higher in melasma patient. However, no studies has defined comparison of thyroid hormone level on varying severity of melasma yet.

Aim: To study comparison of thyroid hormone level across varying severity of melasma, between mild and moderate-severe melasma, evaluated using mMASI and Janus II *facial analysis system*.

Metode: Forty eight women included in this cross-sectional study. Samples were included using consecutive sampling method. The severity of melasma was measured subjectively using mMASI score in Dermatology and Venereology Outpatient Clinic of Cipto Mangunkusumo General National Hospital after the diagnosis of melasma has been made. The measurement was confirmed using Janus II *facial analysis system* in Gatot Subroto General Army Hospital.

Lastly, we measured the level of FT4 and TSH of each

patients.

Results:

Based on mMASI score, 24 patients (50%) were diagnosed as mild melasma and 24 patients (50%) were diagnosed as moderate-severe melasma. As many as two patients (4%) were also diagnosed with subclinical hyperthyroidism and one patient (2%) with subclinical hypothyroidism. There is no association between severity of melasma and level of TSH and FT4. Janus examination using polarisasi light modalities has weak positive correlation with level of FT4 ($r = 0,3$, $p = 0,039$) and darkness score of mMASI ($r = 0,3$, $p = 0,03$).

Conclusion:

There is no association between TSH and varying severity of melasma. Using mMASI and Janus. FT4 level has weak positive correlation with Janus facial analysis system examination results on polarisasi light modalities.