

## ABSTRAK

### HUBUNGAN ANTARA KADAR SERUM SUBSTANSI P DENGAN DERAJAT KEPARAHAN SINDROM TEROWONGAN KARPAL YANG DIUKUR DENGAN BOSTON CARPAL TUNNEL QUESTIONNAIRE(BCTQ) DI INSTALASI RAWAT JALAN SARAF RSUD Dr SOETOMO SURABAYA

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#### Latar belakang dan tujuan

Sindrom terowongan karpal (STK) diawali dengan gejala sensoris berupa rasa nyeri, tebal, kesemutan pada pergelangan tangan yang menjalar ke siku dan rasa terbakar di daerah distribusi saraf medianus. Evaluasi gejala sindrom terowongan karpal dapat diukur dengan Bostonn Carpal Tunnel Questionnaire(BCTQ). Neurotransmitter substansi P meningkat pada tendon penderita STK. Hubungan antara kadar serum substansi P dengan derajat keparahan gejala sindrom terowongan karpal masih belum diketahui, sehingga penelitian ini bertujuan untuk mengetahui hubungan kadar serum substansi P dengan BCTQ, sehingga bisa memberikan sumbangan ilmiah terhadap penatalaksanaan sindrom terowongan karpal

#### Metode:

Penelitian ini analitik observasional dengan rancangan cross sectional dan teknik pengambilan subjek consecutive sampling admission. Subjek penelitian dilakukan pemeriksaan kadar serum substansi P dan BCTQ, kemudian dianalisis

#### Hasil :

Pada 50 subjek penelitian didapatkan 24 subjek pasien dengan kadar serum substansi P tinggi ( $>83\text{pg}$ ) dan kadar serum substansi P rendah ( $<83\text{pg}$ ) sebanyak 26 subjek(52%). Pemeriksaan derajat keparahan gejala berat sebesar 20 subjek (40%) dan derajat keparahan gejala ringan sebanyak 30 subjek (60%). Pemeriksaan derajat keparahan fungsional berat 11 subjek(22%) dan derajat keparahan fungsional ringan 39 subjek(22%). Hasil analisis menunjukkan terdapat hubungan signifikan secara statistik antara kadar serum substansi P dengan derajat keparahan gejala STK dengan  $p$  0,021 dan OR 4,321 (1,242-15,036). Hubungan kadar serum substansi P dengan derajat keparahan fungsional menunjukkan hasil yang tidak bermakna dengan  $p$  sebesar 0,24.

**Kesimpulan:** Terdapat hubungan bermakna antara derajat keparahan gejala sindrom terowongan karpal dengan kadar serum substansi P . Tidak terdapat hubungan antara derajat keparahan fungsional dengan kadar serum substansi P

**Kata Kunci :** Serum substansi P, BCTQ, STK

## ABSTRACT

### ASSOCIATION BETWEEN SERUM SUBSTANCE P LEVELS AND DEGREE OF SEVERITY OF CARPAL TUNNEL SYNDROME ASSESSED WITH BOSTON CARPAL QUESTIONNAIRE (BCTQ) AT OUTPATIENT NEUROLOGY CLINIC OF DR. SOETOMO HOSPITAL

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#### Background and Objective:

Carpal Tunnel Syndrome is initiated with sensory symptoms such as pain, numbness, and tingling of the wrist that extend to the elbow and burning sensation in the distribution of the median nerve. The severity of symptoms in carpal tunnel syndrome can be evaluated using The *Boston* Carpal Tunnel *Questionnaire*. Serum substance P levels were elevated in patients with carpal tunnel syndrome. The Association between serum substance P levels and degree of severity of carpal tunnel syndrome has not been elucidated yet. Hence, this study aimed to investigate the association between serum substance P levels and degree of severity of Carpal tunnel syndrome that could provide scientific contribution in the management of carpal tunnel syndrome.

#### Method:

This study is an analytic observational study using cross sectional design. Subjects were consecutively recruited and submitted to blood draw and BCTQ evaluation.

#### Result :

Among 50 patients of this study, there were 24 patients with high level of serum substance P (>83 pg) and 26 (52%) patients with low level of serum substance P. Assessment of carpal tunnel syndrome severity revealed 20 (40%) subjects with severe degree and 30 (60%) subjects with mild degree. Functional degree of severity tallied 11 (22%) subjects with severe degree and 39 (78%) with mild degree. The result of this study showed that there were statistically significant association between serum substance P levels and degree of severity of carpal tunnel syndrome ( $p= 0.021$ ; OR = 4.321 (1.242–15.036). Association between serum P substance and functional severity did not show significant result with  $p= 0.24$ .

#### Conclusion:

There *was* significant association between serum substance P levels and degree of severity of Carpal Tunnel syndrome. There was no significant association between functional severity of carpal tunnel syndrome and serum substance P levels.

#### Keyword :

Substance P serum, BCTQ,CTS