

HUBUNGAN ANTARA TINGKAT SPIRITUALITAS DENGAN KADAR SEROTONIN PLASMA PADA PASIEN STROKE ISKEMIK AKUT SAAT ONSET DI RSUP DR. SARDJITO

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INTISARI

Latar Belakang: Stroke di Indonesia merupakan penyebab kematian paling banyak untuk usia >5 tahun dengan jumlah 15,4% dari seluruh kasus kematian dengan tingkat kecacatan yang tinggi pasca stroke. Stroke iskemik secara umum memiliki presentase kasus stroke terbanyak, lebih sering ditemukan daripada stroke hemoragik. Stroke iskemik adalah penyebab utama *premature mortality* di Indonesia. Pada stroke iskemik, terutama dengan gejala depresi, memperlihatkan penurunan aktivitas serotonergik di otak tanpa memperhatikan derajat disabilitas dan lokasi lesi, dan krisis spiritual atau eksistensial biasa terjadi setelah stroke. Obat SSRI sering dipakai untuk pengobatan depresi pasca stroke. Penelitian yang telah ada membuktikan bahwa spiritualitas dapat meningkatkan kadar serotonin.

Tujuan: Penelitian ini bertujuan untuk mengetahui hubungan spiritualitas dengan kadar serotonin plasma pada pasien stroke iskemik akut saat onset di RSUP dr. Sardjito.

Metode: Penelitian ini menggunakan data pasien stroke iskemik akut yang dirawat Unit Stroke RSUP Dr. Sardjito pada bulan Oktober 2019 s.d April 2020 yang berjumlah 20 orang, diperoleh berdasarkan kriteria inklusi dan eksklusi. Penelitian ini menggunakan desain penelitian observasional analitik dengan metode *cross sectional*. Tingkat spiritualitas diukur dengan kuisioner SIBS. Kadar serotonin plasma diukur dari spesimen darah vena pasien yang diambil pada pagi hari di RSUP. Dr. Sardjito. Analisis dilakukan dengan menggunakan uji *Mann Whitney, Kruskal Wallis, T independen*, dan *Spearman*.

Hasil: Sebanyak 75% subjek memiliki tingkat spiritualitas tinggi dan 25% memiliki tingkat spiritualitas sedang. Tidak ada subjek yang memiliki tingkat spiritualitas rendah. Terdapat rerata kadar serotonin yang lebih tinggi pada kelompok subjek dengan tingkat spiritualitas tinggi (91.9 ± 51.64) daripada rerata kadar serotonin pada kelompok subjek dengan tingkat spiritualitas sedang (70.32 ± 32.31). Karakteristik demografis subjek meliputi usia dan jenis kelamin, dan faktor risiko subjek meliputi riwayat merokok, dislipidemia, dan diabetes mellitus, tidak memiliki hubungan yang signifikan dengan kadar serotonin plasma maupun tingkat spiritualitas ($p > 0,05$). Analisis uji Rank Spearman antara tingkat spiritualitas dengan kadar serotonin plasma menunjukkan bahwa korelasi antarvariabel tersebut memiliki hubungan sangat lemah ($r = 0.082$). Uji Kruskal Wallis menunjukkan bahwa tidak ada hubungan yang bermakna antarvariabel ($p = 0.406$).

Kesimpulan: Terdapat hubungan yang sangat lemah antara tingkat spiritualitas dengan kadar serotonin plasma pada pasien stroke iskemik akut saat onset di RSUP Dr. Sardjito ($r < 0.20$). Subjek dengan tingkat spiritualitas tinggi memiliki kadar serotonin lebih tinggi daripada subjek dengan tingkat spiritualitas sedang. Faktor perancu seperti usia, jenis kelamin, status merokok, dislipidemia, dan diabetes mellitus tidak mempengaruhi baik terhadap tingkat spiritualitas maupun terhadap kadar serotonin plasma.

Kata Kunci: spiritualitas, serotonin plasma, stroke iskemik akut

**RELATIONSHIP BETWEEN SPIRITUAL LEVELS AND
PLASMA SEROTONIN LEVELS IN
ACUTE ISCHEMIC STROKE PATIENTS ON ONSET
IN RSUP DR. SARDJITO**

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ABSTRACT

Background: Stroke in Indonesia is the most common cause of death for those aged > 5 years with 15.4% of all cases of death with a high level of disability after stroke. Ischemic stroke in general has the highest percentage of stroke cases, more often found than hemorrhagic stroke. Ischemic stroke is the main cause of premature mortality in Indonesia. Ischemic stroke, especially with depressive symptoms, shows decreased serotonergic activity in the brain regardless of the degree of disability and location of the lesion, and spiritual or existential crises are common after stroke. SSRI drugs are often used to treat post-stroke depression. Existing research has shown that spirituality can increase serotonin levels.

Objective: This study aims to determine the relationship between spirituality and plasma serotonin levels in acute ischemic stroke patients at onset at dr. Sardjito.

Methods: This study used data on acute ischemic stroke patients who were treated by the Stroke Unit of Dr. Sardjito in October 2019 to April 2020, totaling 20 people, were obtained based on inclusion and exclusion criteria. This study uses an analytical observational research design with a cross sectional method. Spirituality level was measured by SIBS questionnaire. Plasma serotonin levels were measured from the patient's venous blood specimen taken in the morning at the RSUP. Dr. Sardjito. Analysis was performed using the Mann Whitney, Kruskal Wallis, independent T, and Spearman tests.

Results: 75% of the subjects had high spirituality and 25% had moderate spirituality. No subject has a low spiritual level. There was a higher mean serotonin level in the group of subjects with a high spiritual level (91.9 ± 51.64) than the mean serotonin level in the group of subjects with a moderate spiritual level (70.32 ± 32.31). Demographic characteristics of the subject, including age and sex, and the risk factors of the subject, including a history of smoking, dyslipidemia, and diabetes mellitus, did not have a significant relationship with plasma serotonin levels or spirituality ($p > 0.05$). Spearman's Rank test analysis between spirituality level and plasma serotonin levels showed that the correlation between these variables had a very weak relationship ($r = 0.082$). Kruskal Wallis test showed that there was no significant relationship between variables ($p = 0.406$).

Conclusion: There is a very weak relationship between spirituality level and plasma serotonin levels in acute ischemic stroke patients at onset at RSUP Dr. Sardjito ($r < 0.20$). Subjects with a high spiritual level had higher serotonin levels than subjects with a moderate spiritual level. Confounding factors such as age, gender, smoking status, dyslipidemia, and diabetes mellitus did not affect either the spirituality level or the plasma serotonin level.

Keywords: spirituality, plasma serotonin, acute ischemic stroke