

INTISARI

KORELASI KADAR VITAMIN D DENGAN DERAJAT KEPARAHAN SEPSIS BERDASARKAN SKOR SOFA

Latar Belakang: Sepsis merupakan suatu kondisi disfungsi organ yang mengancam jiwa. Derajat keparahan sepsis direpresentasikan dengan peningkatan skor *Sequential (sepsis-related) Organ Failure Assessment* (SOFA). Vitamin D diketahui berperan dalam sistem imun alami dan imun adaptif. Insufisiensi Vitamin D dikaitkan dengan keparahan sepsis yang dinilai berdasarkan skor SOFA

Tujuan Penelitian: Untuk mengetahui korelasi antara kadar vitamin D dengan derajat keparahan sepsis berdasarkan skor SOFA.

Metode Penelitian: Observasional dengan desain penelitian *cross-sectional*. Dari 59 subjek sepsis yang telah menandatangani *informed consent* dilakukan pengambilan darah skor SOFA dan pemeriksaan kadar vitamin D. Penelitian dilakukan bulan Desember 2018 – Oktober 2019. Hubungan kadar vitamin D dengan skor SOFA dalam penelitian ini dianalisis menggunakan uji korelasi *spearman*. Subyek dilakukan subanalisis menggunakan *Mann Whitney Test* untuk mengetahui perbedaan median skor SOFA pada kelompok defisiensi/insufisiensi dan sufisien.

Hasil Penelitian: Dari 59 pasien sepsis yang terlibat dalam penelitian ini, yang termasuk dalam kategori vitamin D defisiensi/insufisiensi sebanyak 55 subyek (93,2%) dan sufisien 4 subyek (6,8%). Hasil uji korelasi *spearman* didapatkan hasil $r = -0,246$ dan $p = 0,030$ menunjukkan bahwa semakin tinggi kadar vitamin D maka semakin membaik keparahan sepsis (skor SOFA semakin rendah) dan bermakna secara statistik ($p < 0,05$). Hasil sub analisis dengan *Mann Whitney Test* kelompok defisiensi/insufisien dan sufisien berturut turut memiliki median skor SOFA 8,0 dan 5,0 dengan $p = 0,048$, secara statistik bermakna.

Kesimpulan: Terdapat korelasi negatif antara kadar vitamin D dengan derajat keparahan sepsis berdasarkan skor SOFA

Kata kunci : *Sepsis, vitamin D, skor SOFA*

ABSTRACT

CORRELATION OF VITAMIN D LEVEL WITH SEVERITY OF SEPSIS BASED ON SOFA SCORE

Background: Sepsis is a potentially life-threatening condition. Severity of sepsis is represented by the increasing number of Sequential (sepsis-related) Organ Failure Assessment (SOFA) score. Vitamin D has roles in innate and adaptif immunity. Vitamin D insufficiency is associated with severity of sepsis.

Objective: To determine whether there is a correlation between vitamin D (25 (OH) D) levels and severity of sepsis based on SOFA score

Research method: Observational with cross-sectional research design from December 2018 – October 2019. We included 38 subjects that signed the informed concent. Blood sampling of SOFA score and vitamin D was taken after the patients diagnosed sepsis. The analysis of correlation between SOFA score and vitamin D level used SPSS with Spearman test. The research is further subanalyzed by Mann Whitney test to know the median difference between defficiency/insufficiency and sufficient vitamin D group and its significancy (p value).

Results: The subjects of vitamin D defficiency/insufficiency group is 34 subjects (89.5%) and sufficient group is 4 subjects (10.5%). The correlation test by Spearman test showed $r = -0.592$ and $p = 0.00$ (signifficant if $p < 0.05$). This result means that the higher level of vitamin D, the better severity of sepsis (lower SOFA score) and statistically signifficant ($p < 0.05$). The result of sub analysis with Mann Whitney test, on defficient/insufficient vitamin D group compares with sufficient group, the SOFA score median respectively 8.0 and 5.0, $p 0.048$ (statistically signifficant if $p < 0.05$).

Conclusion: There is negative correlation between vitamin D and severity of sepsis based on SOFA score.

Key words: *Sepsis, vitamin D, SOFA score*