

Hubungan vascular endothelial growth factor dengan tingkat keparahan karsinoma hepatoselular = Association between vascular endothelial growth factor and severity of hepatocellular carcinoma staging

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Abstrak

Latar Belakang: Derajat keparahan karsinoma hepatoselular (KHS) yang dinilai dengan klasifikasi Barcelona Clinic Liver Cancer (BCLC) merupakan faktor prognostik utama KHS. Penilaian kadar serum Vascular Endothelial Growth Factor (VEGF) dianggap dapat mencerminkan tingkat keparahan KHS. Namun, belum ada kesepakatan mengenai hubungan tingkat keparahan KHS dengan kadar serum VEGF.

Tujuan : Mengetahui hubungan kadar serum VEGF dengan tingkat keparahan KHS dengan menilai perbedaan rerata kadar serum VEGF pada berbagai tingkat keparahan KHS.

Metode : Penelitian ini adalah studi potong lintang untuk menentukan hubungan antara kadar serum VEGF dengan tingkat keparahan KHS berdasarkan klasifikasi BCLC. Penelitian ini dilakukan di Rumah Sakit Cipto Mangunkusumo antara bulan Januari 2015 dan Mei 2015. Uji statistik yang digunakan untuk menilai hubungan kadar serum VEGF dengan klasifikasi BCLC ialah analisis one way ANOVA, dan dilanjutkan dengan analisis post hoc Tukey Schaffe.

Hasil : Sebanyak 61 subyek KHS diikutkan dalam penelitian ini. Pada penelitian ini tidak ditemukan subyek dengan BCLC stage 0. Rerata kadar serum VEGF BCLC stage A adalah $288,26 \pm 156,6$ pg/ml; BCLC stage B: $434 \pm 164,8$ pg/ml; BCLC stage C: $785,57 \pm 194,25$ pg/ml; BCLC stage D: $1537,97 \pm 660,62$ pg/ml. Analisis one way ANOVA menunjukkan perbedaan bermakna ($P < 0,001$) antara kadar serum VEGF dengan tingkat keparahan KHS berdasarkan klasifikasi BCLC. Analisis post hoc dengan Tukey Schaffe menunjukkan adanya perbedaan bermakna antara BCLC stage A dan C ($p < 0,05$) serta BCLC stage A dan D ($p < 0,001$), BCLC stage B dan D ($p < 0,001$), dan BCLC stage C dan D ($p < 0,001$). Tidak ditemukan perbedaan bermakna antara subyek dengan BCLC stage A dan B, dan antara BCLC stage B dan C.

Kesimpulan : Didapatkan kadar serum VEGF yang meningkat sesuai dengan tingkat keparahan KHS berdasarkan klasifikasi BCLC terutama untuk BCLC stage B ke atas.

<hr><i>Background : The severity of Hepatocellular Carcinoma (HCC) stratified by Barcelona Clinic Liver Cancer (BCLC) staging classification has been one of the main prognostic factors of patients with HCC.

Serum vascular endothelial growth factor (VEGF) examination can be reflect to predict the severity of HCC. Although, there is no consensus among experts about the severity of HCC staging and serum VEGF levels.

Aim : To determine the association between serum VEGF levels and severity of HCC.

Methods : A cross-sectional study to determine the association between serum VEGF levels and the severity of HCC stratified by BCLC staging classification. The study was conducted at Cipto Mangunkusumo Hospital between January 2015 and May 2015. One way ANOVA analysis was used to assess the association between serum VEGF levels and BCLC classification staging. Post hoc analysis will be done using Tukey Schaffe test.

Results: There were 61 HCC subjects included to this study. There were no subjects with BCLC stage 0. The mean VEGF serum level in patients with BCLC stage A was 288.26 ± 156.6 pg / ml; BCLC stage B: 434 ± 164.8 pg / ml; BCLC stage C: 785.57 ± 194.25 pg/ml; and BCLC stage D: 1537.97 ± 660.62 pg/ml.

One way ANOVA showed significant statistical difference ($P < 0.001$) between mean serum VEGF levels and the severity in all BCLC stages. Post hoc analysis using Tukey Schaffe test showed significant stastical difference between BCLC stage A and C ($p < 0.05$), BCLC stage A and D ($p < 0.001$), BCLC stage B and D ($p < 0.001$), and BCLC stage C and D ($p < 0.001$). There were no significant statistical differences between patients with BCLC stage A and B, and between BCLC stage B and C.

Conclusion: We found that increased levels of serum VEGF were associated with the severity of HCC based on BCLC staging classification, especially in patients with BCLC stage B and upwards.</i>