Analisis korelasi transforming growth factor 1 (TGF B-1) serum pada pasien kanker paru jenis karsinoma bukan sel kecil (KPKBSK) stage lanjut = The correlation analysis of transforming growth factor 1 (TGF B-1) serum in advanced non small cell lung cancer (NSCLC) patients

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Abstrak

Latar Belakang: Tingginya angka kejadian kanker paru menyebabkan diperlukan pemanfaatan suatu penanda biologis spesifik kanker paru untuk menilai progresifitas penyakit. Transforming growth factor-β adalah protein yang disekresi untuk meregulasi proliferasi, diferensiasi dan kematian dari berbagai jenis sel. Semua jenis sel kekebalan termasuk sel B, sel T, sel dendritik dan makrofag mensekresi TGF-β. Jenis TGF-β yang terbanyak adalah TGF-β1. Diperlukan pengukuran kadar TGF-β1 serum darah tepi sebagai faktor prognostik pada kanker paru khususnya KPKBSK stage lanjut
Metode: Penelitian ini merupakan studi perbandingan dengan disain potong lintang pada pasien kanker paru yang telah tegak diagnosis dan bersedia diambil serum darah tepi untuk pemeriksaan kadar TGF-β1 serum menggunakan Human TGF-β1 Quantikine ELISA kit dari R D. Kadar TGF-β1 serum diukur pada 68 subjek yang terdiri dari 30 subjek kelompok kanker paru dan 38 subjek kelompok bukan kanker paru.
Hasil: Kadar TGF-β1 serum pada kelompok kanker paru meningkat signifikan lebih tinggi dibandingkan kelompok bukan kanker paru (median; min-max) (3601.85; 2006.87-14995.25 pg/mL vs 2510.11; 646.31-5584.07 pg/mL) (P = 0.000). Tidak ditemukan hubungan antara kadar TGF-β1 serum dengan jenis kelamin, umur, riwayat merokok, gejala klinis, gambaran bronkoskopi, jenis sitologi/histopatologi, KPKBSK stage lanjut, dan status tampilan umum. Median Survival Time (95% CI) TGF-β1 < 3601.85 pg/mL adalah 9.7 (2.4-16.9) bulan sedangkan TGF-β1 ≥ 3601.85 pg/mL adalah 16.7 (7.7-25.7) bulan. Over all survival TGF-β1 13.3 (5.8-20.8) bulan
Kesimpulan: Kadar TGF-β1 serum meningkat pada kelompok kanker paru dibandingkan kelompok bukan kanker paru. Kadar TGF-β1 serum belum dapat digunakan sebagai marker prognostik kanker paru.
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Beckground: The high incidence rate of lung cancer leads to the utilization of a specific biological marker of lung cancer to assess disease progression. Transforming growth factor-β is a secreted protein to regulate the proliferation, differentiation and death of different cell types. Types of immune cells are B cells, T cells, dendritic cells and macrophages secreting TGF-β. The most common type of TGF-β is TGF-β1. Therefore, measurement of serum level of TGF-β1 as a prognostic factors in lung cancer, especially advanced stage NSCLC, to assess progressivity of lung cancer is needed. Method: This study is a comparative study with cross-sectional design in lung cancer patients who had been diagnosed and were willing to be taken for examination of peripheral blood serum levels of TGF-β1 using the Quantikine Human TGF-β1 ELISA kit from R&D system. TGF-β1 serum levels were measured in 68 subjects consisted of 30 subjects with lung cancer group and 38 subjects controlled group.
Result: Serum level of TGF-β1 in lung cancer group increased significantly higher than control group

(median; min-max) (3601.85; 2006.87-14995.25 pg/mL vs. 2510.11; 646.31-5584.07 pg/mL) (P = 0.000). There was no association between serum level of TGF-β1 with gender, age, smoking history, clinical symptoms, bronchoscopy, cytology/histopathology, advanced stage of NSCLC, and performance status. Median Survival Time (95% CI) TGF-β1 <3601.85 pg/mL was 9.7 (2.4-16.9) months while TGF-β1 ≥ 3601.85 pg/mL was 16.7 (7.7-25.7) months. Over all survival TGF-β1 13.3 (5.8-20.8) months.

Conclusion: Serum level of TGF-β1 is higher in the lung cancer group compared to controlled group. Serum TGF-β1 levels can not be used as a prognostic markers of lung cancer.