Korelasi Asupan Asam Amino Rantai Cabang Dengan Hitung Limposit Total Pada Pasien Kanker Kepala Leher = Correlation Between Branched-Chain Amino Acids Intake And Total Lymphocyte Count In Head And Neck Cancer Patients

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Abstrak

Latar Belakang: Hitung limfosit total berhubungan dengan prognosis serta harapan hidup pasien kanker kepala leher. Regulasi limfosit dipengaruhi berbagai hal termasuk nutrisi. Salah satu zat gizi yang berperan dalam proliferasi limfosit adalah asam amino rantai cabang. Penelitian ini bertujuan untuk melihat korelasi antara asupan asam amino rantai cabang dengan hitung limfosit total pada pasien kanker kepala dan leher.
Metode: Studi potong lintang ini dilakukan pada subjek dewasa dengan kanker kepala leher yang belum menjalani terapi di poliklinik radioterapi dan hematologi onkologi medik RSCM. Asupan asam amino rantai cabang dinilai dengan 3 x 24-h food recall dan FFQ semi kuantitatif. Hitung limfosit total diukur dengan differential blood cell counter.
Hasil: Sebanyak 85 subjek penelitian dengan rerata usia 53 tahun, dengan sebagian besar laki-laki, terdiagnosis kanker nasofaring dengan jenis karsinoma sel skuamosa dan stadium IV. Rerata subjek memiliki status gizi normal, dengan rerata asupan energi 29,99 ± 0,95 kkal/kgBB dan protein 1,39 ± 0,05 g/kgBB dengan penilaian FFQ semi kuantitatif. Rerata asupan AARC pada subjek sebesar 10,92 ± 0,48 gram dengan FFQ semi kuantitatif. Sebagian besar subyek memiliki hitung limfosit total pada rentang normal. Terdapat sebanyak 17.6% subyek dengan hitung limfosit total yang rendah. Terdapat korelasi lemah antara asupan asam amino rantai cabang dengan hitung limfosit total (r=0,230, p=0,029).
Kesimpulan: Terdapat korelasi bermakna yang lemah antara asupan AARC dengan hitung limfosit total pada subjek kanker kepala leher yang belum menjalani kemoradioterapi.
.....Background: Total lymphocyte count is related with prognosis and survival rate of head and neck cancer patients. Lymphocyte regulation is affected by multiple factors, including nutrition. One of the nutrients that plays role in lymphocyte proliferation is branched-chain amino acids. This study aims to investigate the correlation between branched-chain amino acid and total lymphocyte count in head and cancer patients.
Method: This cross-sectional study was conducted on adults with head and neck cancer who had not undergone therapy at the radiotherapy and medical hematology oncology clinic at RSCM. Branched-chain amino acid intake was assessed using 3x24-h food recall and semi quantitative FFQ. Total lymphocyte count was measured with differential blood cell counter.
Results: Eighty-five subjects with a mean age of 53 years, mostly are male, diagnosed with nasopharyngeal cancer, with histopathology appearance of squamous cell carcinoma, and stage IV cancer. The average subject had normal nutritional status, with an average intake of 29.99 ± 0.95 kcal/kgBW of energy and 1.39 ± 0.05 g/kgBW of protein with a semi quantitative FFQ assessment. The average branched-chain amino acid intake in subjects was 10,92 ± 0,48 gram with semi quantitative FFQ. There were 17.6% subjects with low total lymphocyte count. There was a low correlation between intake of branched-chain amino acids and total lymphocyte count (r=0,230, p=0,029).
Conclusion: There was a significant low correlation between branched-chain amino acids intake with total

lymphocyte count in head and neck cancer subjects who had not undergone chemoradiotherapy.