

Korelasi Antara Asupan Asam Amino Rantai Cabang dengan Massa Bebas Lemak dan Status Fungsional pada Kanker Kepala Leher = Correlation Between Branched Chain Amino Acid Intake with Fat Free Mass and Functional Status in Head and Neck Cancer

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Abstrak

Latar Belakang: Penurunan massa bebas lemak dan status fungsional akan mempengaruhi prognosis pada pasien kanker kepala leher. Pembentukan massa bebas lemak dipengaruhi berbagai hal termasuk nutrisi. Salah satu zat gizi yang berperan dalam adalah asam amino rantai cabang. Karnofsky Performance Scales (KPS) adalah salah satu parameter status fungsional yang dinilai secara rutin untuk pasien kanker. Penelitian ini bertujuan untuk melihat korelasi antara asupan asam amino rantai cabang dengan massa bebas lemak dan status fungsional pada pasien kanker kepala dan leher.

Metode: Studi potong lintang ini dilakukan pada subjek dewasa dengan kanker kepala leher secara consecutive sampling method di poliklinik radioterapi RSCM. Wawancara dilakukan untuk mengumpulkan data karakteristik dasar, data asupan zat gizi dan penilaian status fungsional. Pengukuran komposisi tubuh massa bebas lemak dengan alat bioimpedance analysis single Frequency. Pengukuran status fungsional dengan KPS.

Hasil: Sebanyak 77 subjek penelitian dengan rerata usia 52 tahun, dengan sebagian besar berjenis kelamin laki-laki, 61 % berpendidikan menengah dan sebagian besar bekerja. Lokasi kanker terbanyak pada nasofaring dengan jenis karsinoma sel skuamosa dan stadium IV. Rerata subjek memiliki status gizi normal. Penilaian 3 x24-h Food Recall didapatkan dengan rerata asupan energi 27,44 kkal/kgBB dan protein 1,33 g/kgBB. Penilaian rerata asupan AARC dengan FFQ semi kuantitatif pada subjek penelitian didapatkan sebesar 10,99 gram. Pada penelitian ini didapatkan rerata nilai massa bebas lemak 42,10 kg dengan sebanyak 46 % subjek penelitian laki-laki memiliki index massa bebas lemak < 17 kg/m² sedangkan pada subjek penelitian wanita terdapat 16 % dengan index massa bebas lemak <15 kg/m². Status fungsional dengan menggunakan KPS subjek penelitian dengan median 90 dengan nilai minimum 40. Sekitar 11,6% subjek penelitian yang memiliki nilai KPS kurang dari sama dengan 70. Terdapat korelasi lemah antara asupan asam amino rantai cabang dengan massa bebas lemak ($r=0,238$, $p=0,037$). Tidak terdapat korelasi antara asupan AARC dengan status fungsional ($r=0.147$; $p>0.05$)

Kesimpulan: Terdapat korelasi bermakna yang lemah antara asupan AARC dengan massa bebas lemak dan tidak terdapat korelasi antara asupan AARC dengan status fungsional pada subjek kanker kepala leher

.....Background: Decreased fat-free mass and functional status will affect the prognosis in head and neck cancer patients. The formation of fat-free mass is influenced by various things including nutrition. One of the nutrients that play a role in is branched chain amino acids. Karnofsky Performance Scales (KPS) is a functional status parameter that is routinely assessed for cancer patients.

Methods: This cross-sectional study was conducted on adult subjects with head and neck cancer by consecutive sampling method at the radiotherapy polyclinic RSCM. Interviews were conducted to collect data on basic characteristics, data on nutrient intake and assessment of functional status. Measurement of body composition fat-free mass using a single Frequency bioimpedance analysis tool. Functional status

measurement using the KPS.

Results: A total of 77 study subjects with an average age of 52 years, with most of them being male, 61% having secondary education and most of them working. Most cancer locations in the nasopharynx with the type of squamous cell carcinoma and stage IV. On average, the subjects had normal nutritional status. The 3 x24-h Food Recall assessment was obtained with an average energy intake of 27.44 kcal/kgBW and protein 1.33 g/kgBW. The assessment of the average BCAA intake with semi-quantitative FFQ on research subjects was 10.99 grams. In this study, the average fat-free mass value was 42.10 kg with as many as 46% of male research subjects having a fat-free mass index <17 kg/m² while in female research subjects there were 16% with a fat-free mass index <15 kg/m². Functional status using KPS of research subjects with a median of 90 with a minimum value of 40. Approximately 11.6% of study subjects had a KPS value of less than 70. There was a weak correlation between intake of branched-chain amino acids and fat-free mass ($r=0.238$, $p=0.037$). There was no correlation between BCAA intake and functional status ($r=0.147$; $p>0.05$)

Conclusion: There is a weak significant correlation between BCAA intake and fat-free mass and there is no correlation between BCAA intake and functional status in head and neck cancer subjects