Perbedaan Appendicular Skeletal Muscle Index pada Tumor Metastasis dengan dan Tanpa Keterlibatan Sistem Saraf Pusat = Appendicular Skeletal Muscle Index Difference in Metastatic Tumors With and Without Involving the Central Nervous System

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Abstrak

Latar Belakang: Kanker primer tahap lanjut dapat bermetastasis ke sistem saraf pusat (SSP) yaitu otak dan spinal, maupun ke selain SSP. Perbedaan gejala klinis antara metastasis SSP dan tanpa keterlibatan SSP adalah defisit neurologis pada metastasis SSP. Kedua metastasis tersebut dapat berisiko menyebabkan indeks massa otot skeletal yang rendah akibat gejala klinis dan peningkatan metabolisme akibat kanker. Namun, belum diketahui perbedaan di antara keduanya. Tujuan penelitian ini untuk mengetahui perbedaan appendicular skeletal muscle index (ASMI) pada pasien metastasis dengan dan tanpa keterlibatan SSP. Metode: Penelitian ini adalah studi potong lintang pada subjek berusia 18-65 tahun. Karakteristik subjek berupa usia, jenis kelamin, indeks massa tubuh, status gizi berdasarkan ASPEN, lokasi tumor primer, lokasi metastasis, waktu terdiagnosis metastasis, defisit neurologis, asupan energi dan protein, Karnofsky Performance Scale, kemoterapi, terapi glukokortikoid, dan nilai ASMI. Analisis bivariat digunakan untuk menilai perbedaan nilai ASMI antara metastasis SSP dan tanpa keterlibatan SSP. Hasil: Terdapat 59 subjek dengan nilai ASMI rendah. Rerata nilai ASMI pada metastasis SSP lebih rendah (3,81±1,19 kg/m2) dibandingkan dengan metastasis tanpa keterlibatan SSP (3,97±0,93 kg/m2) dengan perbedaan tidak signifikan pada kedua kelompok (p = 0,568). Terdapat perbedaan bermakna antara ASMI rendah dengan jenis kelamin (p=0,000), asupan energi (p=0,012), disfagia (p=0,027), nyeri kepala (p=0,033), dan gangguan kognitif (p=0,032). Kesimpulan: Tidak ditemukan perbedaan bermakna antara subjek yang memiliki ASMI rendah pada metastasis SSP dan tanpa keterlibatan SSP. Perbedaan bermakna ditemukan antara ASMI dengan karakteristik subjek yaitu jenis kelamin, asupan energi, disfagia, nyeri kepala, dan gangguan kognitif.

.....Background: Advanced primary cancer can metastasize to the central nervous system (CNS), namely the brain and spinal cord, or to other than the CNS. The difference in clinical symptoms between CNS metastases and those without CNS involvement is the neurological deficit in CNS metastases. Both metastases may be at risk for low skeletal muscle mass index due to clinical symptoms and increased metabolism due to cancer. However, the differences between them are unknown. The aim of this study was to determine the difference of appendicular skeletal muscle index in metastatic patients with and without CNS involvement. Methods: This study was a cross-sectional study on subjects aged 18-65 years. Subject characteristics included age, gender, body mass index, nutritional status based on ASPEN, primary tumor location, metastasis location, time of metastasis diagnosis, neurological deficits, energy and protein intake, Karnofsky Performance Scale, chemotherapy, glucocorticoid therapy, and ASMI value. Bivariate analysis was used to assess the difference in ASMI value between CNS metastasis and without CNS involvement Results: There were 59 subjects with low ASMI values. The mean ASMI value in CNS metastasis was lower (3,81±1,19 kg/m2) compared to metastasis without CNS involvement (3,97±0,93 kg/m2) without significant difference in both groups (p=0,568). There was a significant difference between low ASMI and

gender (p=0,000), energy intake (p=0,012), dysphagia (p=0,027), headache (p=0,033), and cognitive impairment (p=0,032). Conclusion: No significant difference was found between subjects who had low ASMI in CNS metastasis and without CNS involvement. Significant differences were found between ASMI and subject characteristics such as gender, energy intake, dysphagia, headache, and cognitive impairment.