Hubungan antara Kekuatan Genggam Tangan dan Massa Bebas Lemak Pada Pasien Kanker Serviks yang Menjalani Radioterapi di Poliklinik Radioterapi Rumah Sakit Umum Pusat Nasional Dr. Cipto Mangunkusumo = Association between Hand Grip Strength and Fat-Free Mass in Cervical Cancer Patients Undergoing Radiotherapy at The Radiotherapy Outpatients Clinic of Dr. Cipto Mangunkusumo Hospital

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Abstrak

Pasien kanker serviks berisiko tinggi mengalami malnutrisi. Asupan makanan yang tidak adekuat, peningkatan kebutuhan, penurunan aktivitas fisik dan hiperkatabolisme, mendorong terjadinya malnutrisi. Kondisi ini dapat terjadi selama sakit maupun pada saat pengobatan, yang dapat memengaruhi status gizi pasien. Prevalensi malnutrisi pada pasien kanker serviks sebesar 4866% dan meningkat hingga 82% setelah mendapat terapi. Pasien kanker serviks, 25% mengalami cachexia dan 3369% mengalami sarkopenia. Penurunan massa otot yang merupakan penyusun utama massa bebas lemak (MBL), secara negatif memengaruhi efektivitas terapi dan kelangsungan hidup pasien. Bioelectrical impedance analysis (BIA) adalah alat tervalidasi untuk mengukur MBL sebagai bagian dari diagnosis malnutrisi, namun tidak selalu tersedia di fasilitas kesehatan. Penelitian menunjukkan bahwa kekuatan genggam tangan (KGT) dapat dijadikan sebagai prediktor MBL. Pengukuran KGT dengan handheld dynamometers (HHD) yang relatif murah, valid, dan andal, masih jarang digunakan. Penelitian ini bertujuan untuk melihat hubungan antara KGT dan MBL pada pasien kanker serviks yang menjalani radioterapi di Poliklinik Radioterapi RSCM. Penelitian menggunakan desain potong lintang pada subjek usia 1860 tahun. KGT dinilai menggunakan Jamar digital HHD. MBL dinilai menggunakan BIA single frequency Omron® HBF375. Terdapat 54 subjek dengan median usia 49 tahun, mayoritas stadium III, tidak terdapat metastasis dan komorbid, dan mendapat radioterapi saja. Mayoritas subjek tergolong BB lebih, dengan rerata asupan energi 20,79 ± 6,70 kkal/kgBB/hari, median asupan protein 0,68 (0,051,87) g/kgBB/hari, dan rerata asupan lemak 31,22 ± 8,81% dari energi total. Mayoritas asupan energi, protein dan lemak tergolong kurang dibandingkan dengan rekomendasi ESPEN. Rerata KGT 23,54 ± 5,16 kg dan rerata MBL 36,40 ± 6,03 kg. Dilakukan uji korelasi antara KGT dan MBL. Terdapat korelasi positif yang cukup antara KGT dan MBL pada pasien kanker serviks yang menjalani radioterapi (r = 0,346, p = 0,010). KGT berkorelasi positif kuat dengan MBL (r = 0,601, p = 0,001) pada pasien kanker serviks yang hanya menjalani radioterapi (n=28). Pemeriksaan KGT kemungkinan dapat memprediksi MBL, sehingga dapat membantu diagnosis malnutrisi lebih dini dan mencegah luaran buruk pada pasien kanker serviks yang menjalani radioterapi, terutama di fasilitas kesehatan yang tidak tersedia BIA. Penelitian lebih lanjut diperlukan untuk mendapatkan formulasi dalam memprediksi MBL dari KGT.

.....Cervical cancer patients are at high risk for malnutrition. Inadequate food intake, increased energy and protein requirements, decreased physical activity and hypercatabolism in cancer patients lead to malnutrition. This condition can occur during illness or during treatment, which can affect the nutritional status of the patient. The prevalence of malnutrition in cervical cancer patients was 4866% and increased to 82% in patients receiving therapy. Patients with cervical cancer, 25% were cachectic and 33%–69% were

sarcopenic. Loss of muscle mass, which are the main constituents of fat free mass (FFM), negatively impact therapeutic efficacy and survival in cervical cancer patients. Bioelectrical impedance analysis (BIA) is a validated tool for measuring FFM, as part of malnutrition, but it is not always available in health facilities. Research shows that hand grip strength (HGS) can be used as a predictor of FFM. HGS measurement with handheld dynamometers (HHD) which is relatively cheap, valid, and reliable, is still rarely used. This study aims to examine the relationship between HGS and FFM in cervical cancer patients undergoing radiotherapy at the Radiotherapy Outpatients Clinic of Dr. Cipto Mangunkusumo Hospital. The study used a cross-sectional design on subjects aged 1860 years. HGS was assessed using a Jamar digital hand dynamometer. FFM was assessed using the BIA single frequency Omron® HBF375. A total of 54 study subjects with a median age of 49 years, the majority were in stage III, had no metastases, received radiation therapy only, and had no comorbidities. Most of the subjects were classified as overweight and obes, with a mean of energy intake 20.79 ± 6.70 kcal/kgBW/day, a median of protein intake 0.68 (0.051.87) g/kgBW/day, and an average of fat intake 31.22 ± 8.81% of the total energy. The majority of the energy, protein and fat intakes were less than the ESPEN recommendations. The mean HGS in the subjects was 23.54 ± 5.16 kg and the mean FFM was 36.40 ± 6.03 kg. Correlation test was conducted between HGS and FFM. There was a moderately positive correlation between HGS and KGT in cervical cancer patients undergoing radiotherapy ($r = 0.346$, $p = 0.010$). HGS was strongly positive correlation with FFM ($r = 0.601$, $p = 0.001$) in cervical cancer patients undergoing radiotherapy only (n=28). HGS maybe able to predict FFM for early diagnose of malnutrition and prevent poor outcomes in cervical cancer patients undergoing radiotherapy, especially in health facilities where BIA isn’t available. Further research is needed to get a formulation in predicting FFM from HGS.