Functional nutritional assessment to the aortic stiffness and cardiac function in patients with low muscle mass

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Amino acids and proteins are important for the muscle metabolism in patients with sarcopenia. High risk of cardiovascular disease is also reported in sarcopenia patients. The relation between amino acid and cardiovascular risk factors such as aortic stiffness, aging, hypertension and obesity. Therefore, we studied the nutritional assessment and the relation to cardiovascular risk factors. Thirty two patients who came to our sarcopenia clinic were studied. Total body composition was measured by DEXA (Dual X-ray Absorptiometry); PWV (Pulse Wave Velocity) and UCG (Ultrasound Cardiography) were recorded. The meal photos by the digital camera and 5-days-meal record was taken and the nutrition intake in the diet was analyzed from the food photographs and 5-days-meal-records. The stages of nutrition were evaluated by CONUT (Controlling Nutritional Status). 13 patients were identified with nutrition disorder by CONUT (1 patient was moderate level and 12 was mild level). And, there was significant correlation between ABI (Ankle-Brachial Index) and Salt (p=0.001, r²=0.44, n=19), SMI (Skeletal Muscle Index) was in significant correlation with energy (p=0.03, r=0.33, n=31), carbohydrate (p=0.04, r=0.32, n=31). DcT (Deceleration Time) correlated with protein in stepwise multiple regression model (p=0.001, r²=0.9, n=6). PWV correlated with LDL cholesterol (p=0.03, r=0.5, n=19). There were no relationship between cardiac function and protein intake. These results suggest that there are some relation between nutrition, body composition and arterial sclerosis in low muscle index patients. More details would be studied for the relationship between skeletal muscle mass and dietary intake, the aortic stiffness and cardiac function in low muscle mass patients such as sarcopenia.

Biography
Ha Cao Thi Thu has completed her Medical Doctor from Hanoi Medical University, Vietnam and currently pursuing PhD course at Kansai Medical University, Japan. She has presented at PENSAs2015 conference, The Japanese Association of Cardiac Rehabilitation 2015 conference about nutrition assessment in sarcopenia patients. Her research theme is about amino acid intake and supplementation in patients with sarcopenia and obesity.

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