A COMPARISON OF MEASURED HEIGHT AND ARM-DEMISPAN, ULNA ESTIMATED HEIGHT AMONG MAINTENANCE HEMODIALYSIS PATIENTS IN DR. SARDJITO HOSPITAL, YOGYAKARTA-INDONESIA

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Objectives: Body height data of maintenance hemodialysis (MHD) patient is required for nutritional assessment and medical needs. As height is often difficult to measure, it could be predicted from body height estimation as alternative way. However, little information is available about accuracy of height estimation equation for Indonesian people, especially in MHD patient. It still needs an evaluation. Evaluating published body height equations for predicting height from arm-demispan and ulna length in MHD patients in Dr. Sardjito Hospital, Yogyakarta.

Methods: Cross-sectional investigation was conducted among MHD patients following hemodialysis in Dr. Sardjito Hospital. Participants were 60 men and 42 woman aged 21 years and older who had signed the informed consent. The body height and length of arm-demispan and ulna were measured out. The equations which were compared as follows are from England, Thailand, Australia, Malaysia, Indonesia, Turkey, Sri Lanka, and India. Statistical analysis were performed using paired t-test.

Results: No significant differences were found between the mean values of predicted using Chittawatanarat (Thailand) equation, Itlapuram and Thummar (India) equation and measured heights in men (p>0,05). Height predicted from Chittawatanarat equations and Itlapuram equations also demonstrated good with measured height and no significant differences were found between the mean values of predicted and measured heights in woman (p>0,05).

Conclusions: The Chittawatanarat, Itlapuram and Thummar equation allow prediction of height with sufficient accuracy for men subject. The Chittawatanarat and Itlapuram equation allow prediction of height with sufficient accuracy for woman subject. Using equations for predicting height from arm-demispan and ulna length in CKD patient should be used with some caution among different health condition and ethnically diverse populations.