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# CORRELATION BETWEEN NUTRITIONAL INDICES AND THE IMPACT OF GENDER AND ETHNICITY AMONG HAEMODIALYSIS PATIENTS

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**Anthropometric measurements are commonly used as proxy indicators of body composition. In dialysis patients, the validity of these measures may be affected by fluid accumulation, inflammation, gender and racial differences. We investigated the effect of gender and ethnic differences on the relationship between measures of nutritional status and body composition. The study involved 45 patients (32 males), over 18 years old, with haemodialysis vintage of ≥ 3 months. Body mass index (BMI), fat mass (FM), lean mass (LM), overhydration level (OH), Waist circumference (WC), hand grip strength (HGS) and pre-dialysis serum albumin were measured according to clinic standards. Participants were of black ethnicity (18), white (16) and Asian-Indian (11). Female had significantly higher LM and lower HGS than male but no gender deference was observed on remaining parameters. No significant effect of ethnicity on all studied parameters even in gender sub-groups analysis. BMI correlated with FM (r2=0.95, p=<0.001) and WC (r2=0.92, p=<0.001) but not with LM (r2=-0.169, p=0.36). This relationship was retained on gender and ethnic sub-groups based analyses. BMI correlated strongly with albumin levels for Asian-Indian patients only (r2=1, p=<0.001). The initial analysis showed that HGS correlated with LM only (r2=0.62, p=<0.001), but the relationship was only retained among males in gender based analysis. By ethnicity, the association was retained for black and white but disappeared among Asian-Indian patients. WC was correlated with FM (r2=0.91, p=<0.001), the relationship was retained on gender and ethnicity based analysis. Results suggest that BMI level provides a good reflection of body fat but not muscle mass. BMI and WC can be used as indicators of body fat regardless of gender and ethnicity in this patient group. HGS is a limited indicator of muscle mass among females and patients of Asian-Indian ethnicity calling for careful consideration when making such inference.**

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