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ANTHROPOMETRIC MEASURES ASSOCIATED WITH VISCERAL ADIPOSITY IN NON-DIALYSIS DEPENDENT CKD. <u>Vitalie Ureche</u>[1] Donna Lawson[2] Ali Iranmanesh[1] Kamyar Kalantar-Zadeh[3] and Csaba P Kovesdy[1] [1]Salem, VA, [2]Blacksburg, VA, and [3]Torrance, CA, USA

Higher body mass index (BMI) has been paradoxically associated with better outcomes in patients with non-dialysis dependent CKD (NDD-CKD), but it is unclear if higher BMI or other easily obtained anthropometric measures of obesity are representative of increased visceral adiposity in this population.

We prospectively compared the ability of BMI and the waist-to-height ratio (WHtR) to predict total (TFA) and visceral fat area (VFA) measured by abdominal CT in 9 leaner patients (mean±SD BMI: 24.0 ± 1.7 kg/m^2) and 11 overweight or obese patients (36.3 ± 4.3 kg/m^2) with CKD stage 3-4 who were matched for age, race, DM and estimated GFR. The associations of BMI and WHtR with TFA and VFA were examined in linear regression models and by calculating and comparing areas under the receiver operating curves (AUC).

Mean±SD TFA (676 ± 302 cm^2 vs. 397 ± 123 cm^2, p=0.03) and VFA (376 ± 205 vs. 217 ± 95, p=0.08) were higher in the obese vs. the lean group. In linear regression models one kg/m^2 higher BMI was associated with 24 cm^2 higher TFA (95%CI: 9-39, p=0.004) and with 15 cm^2 higher VFA (95%CI: 4-25, p=0.008); a one unit higher WHtR was associated with 1945 cm^2 higher TFA (95% CI: 747-3143, p=0.003) and with 1218 cm^2 higher VFA (95% CI: 406-2031, p=0.006). AUC (95%CI) of WHtR and BMI to predict TFA above the median value was 0.82 (0.60-1.00) vs. 0.78 (0.56-0.99), p=0.3 and to predict VFA above the median value was 0.71 (0.47-0.94) vs. 0.66 (0.41-0.91), p=0.4.

BMI and WHtR, two easily obtained anthropometric measures of obesity are significantly associated with CT-measured visceral adiposity in patients with NDD-CKD.