Reviewer’s report

Title: U-shaped association of central body fat with urinary albumin-to-creatinine ratio and microalbuminuria

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Reviewer: Johji Kato

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This is an epidemiological, cross-sectional study by Dittmann et al., who examined the relationship between albuminuria and central body fat in local residents in Germany. What they found in this study are as follows: 1) relatively high values of urinary albumin/creatinine (uACR) were seen in the residents with high and low values of waist circumference (WC) or waist-to-height ratio (WHtR) and with low BMI; 2) increased odds ratios of micro-albuminuria was seen in those with high and low WC and with high WHtR; 3) high values of WC, WHtR, and BMI were associated with increased odds ratio of CKD, while low values of those parameters were not.

Based on those findings, the authors conclude that not only obese but also thin subjects have an increased risk of micro-albuminuria. It is well known that obesity is a risk factor of CKD, therefore, what is relatively new in this study may be an association between being thin and albuminuria.

(1) A concern should be raised over the calculation of uACR. The thin subjects may have had a lower amount of urinary creatinine secretion, thereby showing higher uACR. Did the thin subjects have a high level of urinary albumin (mg/L) too, compared with those with average WC, WHtR, or BMI?

(2) It would be nice for readers to see the median or means and ranges of WC, WHtR, and BMI of each quintiles group.

(3) In figure 1, the curve of relationship between BMI and eGFR looks “V” shaped, upside-down to those of WC and WHtR. Is there any mistake in making figure?

Level of interest: An article of importance in its field

Quality of written English: Acceptable

Statistical review: No, the manuscript does not need to be seen by a statistician.

Declaration of competing interests:

I declar that I have no competing interests.