Reviewer's report

Title: Ethnic differences in the association between waist-to-height ratio and albumin-creatinine ratio: the observational SUNSET study

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Reviewer: Ahmet Selçuk Can

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Ethnic differences in the association between waist-to-height ratio and albumin-creatinine ratio: the observational SUNSET study

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The study aims to compare the association between waist-to-height ratio and albumin-creatinine ratio (ACR) in different ethnic groups. Hindustani-Surinamese men and women had higher ACR than Dutch men and women. The prevalence of diabetes was higher in Hindustani-Surinamese subjects and the prevalence of hypertension was higher in Hindustani-Surinamese women. Type 2 diabetes and hypertension are well known causes of albuminuria and may explain the higher ACR in Hindustani-Surinamese subjects. I think the study should have been performed in subjects without diabetes or hypertension. It is known that this ratio varies with ethnicity and race in the United States. Creatinine excretion is higher in blacks and Mexican Americans than whites and this affects ACR. The authors did not find a significant difference in the association between the association of WHtR to ACR and ethnicity. So it is unclear how the results of this study could have further implications.

Major Compulsory Revisions

Background. Please change abbreviation for waist-to-height ratio from WTH to WHtR in order to use uniform abbreviations among studies. There is a published review that recommends using WHtR as a standard abbreviation. Please refer the following paper:


Provide Company, site of production (city and country) for SECA mechanical scale and OMRON M4 sphygmomanometer

What is the meaning of “In” the last paragraph of Data Collection?

The name of the autoanalayzer was not provided for fasting glucose and urinary
albumin and creatinine assays.

The name of the kits was not provided for urinary albumin and creatinine assays.

RESULTS: Characteristics of the study population: Dutch men and women had the lowest mean BMI. Where was the mean BMI presented? I do not see any BMI in the first column of Table 1.

RESULTS: Mean waist to height ratio and albumin-creatinine ratio: Hindustani-Surinamese men had the highest median ACR of 0.36 (0.20-0.91), followed by the African-Surinamese 0.26 (0.16-0.46) and the Dutch 0.24 (0.16-0.45) mg/mmol (Table 1). I do not see these numbers in Table 1. A p value was not provided. Statistical significance cannot be determined from reading the test. I infer from the manuscript that an ANOVA test was performed on logACR levels. The mean LogACR was not provided in table. The median ACR was provided in the text and that is fine and should not be deleted. The results of the post-hoc test were not provided. So the readers and I will not be able to understand which pair of logACR levels will be different. The results are not clearly presented. The reader should not make any assumptions or inferences to reach any conclusions.

RESULTS: Mean waist to height ratio and albumin-creatinine ratio: The prevalence of albuminuria was lowest among the African-Surinamese. I do not see the frequency of normoalbuminuria, microalbuminuria and macroalbuminuria in men and women from the three different ethnic groups under study. The result of a chi-square test is not provided to support the conclusion of “The prevalence of albuminuria was lowest among the African-Surinamese.”

RESULTS Association between waist-to-height ratio and logACR: In the total population, the logACR increased by 0.353 (0.272-0.435) for every 0.1-point increase in the WTH (Table 2).

I do not see this number in table 2; instead the unadjusted correlation was given as 0.359. Please provide clarification for differences in correlation in the text 0.353 and 0.364 and in table 2. No clarification is needed for table 3.

DISCUSSION Association WTH and logACR: However, the results are in contrast another study that reported no association between the waist circumference and microalbuminuria among South Asian origin subjects with type 2 diabetes in India [25].

The authors performed a study on diabetic and nondiabetic subjects but reference 25 was performed only in diabetic subjects. These two studies are not comparable. I also looked into reference 25 and I could not see a correlation coefficient between waist circumference and ACR.

REFERENCES: References were given as a mixture of full journal names and abbreviated journal names. Please use a uniform style.

Table 1. The log ACR was not given,
Table 1 BMI is missing.
Table 1 A post-hoc test was not given so I cannot ascertain which two groups are different from each other, indicate different groups with superscript letters.
SUPPLEMENT: 2nd column 7th row; I believe it should be WHtR

Minor Essential Revisions

Background - 4th paragraph, 1st sentence: change to between waist-to-height ratio and the ACR

METHODS Data Collection: add comma: Before the physical examination,

METHODS Data Collection: change veryfief to verified

METHODS Data Collection: Put a dot after physical examination.

METHODS Response and participation: Addresses/km2. 2 should be superscript.

METHODS Statistical analysis: As far as I remember SAS Institute Inc. is located in Cary, North Carolina

DISCUSSION Association WTH and logACR: Please remove the extra parenthesis at [[16-17, 26-27].

Please correct reference 7.

Reference 11: Add comma after Froelich M,

Reference 13: space is missing in VishwanathaJK

Reference 22: Correct as Annals of Internal Medicine or its correct abbreviated form.

Reference 34. The name of the paper is not in bold style.

Table 1 is misaligned. The rows for education is not aligned properly, please correct it. Also it did not fit to A4 paper when I printed it.

Table 2. Please change Sexe to Sex

Figure 1 is very similar to Figure 1 of reference 20. Reference 20 can be cited in the legend of the figure or in the text.

Level of interest: An article of insufficient interest to warrant publication in a scientific/medical journal

Quality of written English: Acceptable

Statistical review: Yes, and I have assessed the statistics in my report.

Declaration of competing interests:

I declare that I have no competing interests.