Author's response to reviews

Title: Serum uric acid distribution according to SLC22A12 W258X genotype in a cross-sectional study of a general Japanese population

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Author's response to reviews: see over
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Editor of BMC Medical Genetics

Dear Sir

Thank you very much for the helpful comments on the manuscript entitled “Serum uric acid distribution according to SLC22A12 W258X genotype in a cross-sectional study for a general Japanese population.”

The manuscript was revised again according to the comments, as shown in a separate sheet.

I would greatly appreciate it if you would consider the revised manuscript as a research article for publication in BMC Medical Genetics.

Sincerely,

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I still don’t feel at ease with some formulation used by the authors that do not fit standards for reporting statistical results.

In particular, "The interaction between sex and the X allele for SUA less than 3 mg/dL was 0.23 (95% confidence interval, 0.07-0.80); the odds ratio of X allele being 102.5 (95% confidence interval, 33.9-309.8) in males and 25.6 (95% confidence interval, 14.4-45.3) in females." May I suggest to the authors to rephrase this part as: "The X allele effect for SUA less than 3 mg/dL was significantly (p = 0.02) higher in males (OR=102.5 [33.9-309.8]) than in females (OR=25.6 [14.4-45.3])."

I thank the Editor for the comment. The sentence was revised as below.

“The X allele effect for SUA less than 3 mg/dL was significantly (p<0.001) higher in males (OR=102.5, [33.9-309.8]) than in females (OR=25.6 [14.4-45.3]).”

Similarly, "The difference in mean SUA between WX and WW genotypes was 2.26 mg/dL in males and 1.19 mg/dL in female (F=46.99, d.f.=1, 5014, p=8E-12 for the interaction the genotype and sex among 5,018 individuals with WW or WX)" could be rephrased as: "The difference in mean SUA between WX and WW genotypes was significantly (p = 8E-12) higher in males (2.26 mg/dL) than in females (1.19 mg/dL)."

The sentence was revised as below.

“The difference in mean SUA between WX and WW genotypes was significantly (p=8E-12) higher in males (2.26 mg/dL) than in females (1.19 mg/dL).”

In addition, the following parts were revised.

1. In Results, “The difference among three genotypes was highly significant; F=329.33, d.f.=2, 3410, p<1E-40 in males and F=79.72, d.f.=2, 1607, p=1E-33 in females.” was replaced with “The difference among three genotypes was highly significant both in males (p<1E-40) and females (p=1E-33).”

2. In Results, “The age-adjusted OR (95% CI) of SUA < 3 mg/dL for the X allele was 102.5 (33.9-309.8) in males and 25.6 (14.4-45.3) in females. The corresponding ORs were reduced for SUA < 4 mg/dL, as shown in Table 4. The interaction between sex and the X allele (WX and XX genotypes) was significant (p<0.001); the OR (95% CI) was 0.23 (0.07-0.80) for SUA < 3 mg/dL and 0.17 (0.08-0.35) for SUA < 4 mg/dL.” was replaced

“The age-adjusted OR (95% CI) of SUA < 3 mg/dL for the X allele was 102.5 (33.9-309.8) in males and 25.6 (14.4-45.3) in females. The interaction between sex and the X allele (WX and XX genotypes) was significant (p<0.001); the OR (95% CI) was 0.23 (0.07-0.80) for SUA < 3 mg/dL and 0.17 (0.08-0.35) for SUA < 4 mg/dL.” was replaced
with “The age-adjusted OR (95% CI) of SUA < 3 mg/dL for the X allele was significantly (p<0.001) higher in males (OR=102.5, 95% CI, 33.9-309.8) than in females (OR=25.6, 95% CI, 14.4-45.3). The corresponding ORs were reduced for SUA < 4 mg/dL, as shown in Table 4.”

3. In Results, “The interaction between BMI and X allele was not statistically significant either for males or for females.” was deleted from “Among those with BMI < 25 kg/m², the age-adjusted OR (95% CI) was 116.3 (32.5-416.8) in 2,514 males and 23.3 (12.7-42.9) in 1,355 females, while they were 78.6 (8.4-731.5) in 899 males with BMI > 25 kg/m² and 56.2 (9.9-320.4) in 255 females with BMI > 25 kg/m². The interaction between BMI and X allele was not statistically significant either for males or for females.”

4. In title page, “Corresponce” was corrected with “Correspondence”.

5. In Abstract, “(95% confidence interval, 0.021-0.027)” was replaced with “(95% confidence interval [0.021-0.027])” to match the expression for “The X allele effect for SUA less than 3 mg/dL was significantly (p<0.001) higher in males (OR=102.5, [33.9-309.8]) than in females (OR=25.6 [14.4-45.3]).”

6. In Abstract, “determinant” was replaced with “determining”.

7. In Discussion, “dcovered” was corrected with “discovered”.

8. In Discussion, “frequncy” was corrected with “frequency”.