Uric acid in diabetic nephropathy

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DEAR EDITOR,

We read Dr. Xia and colleagues' article published in the April issue of the *Journal of the Chinese Medical Association* with interest.[1] The author conducted a cross-sectional study to evaluate the correlation between serum uric acid level and two diabetes mellitus (DM)-related morbidities (diabetic nephropathy and diabetic retinopathy).[1] The authors found that serum uric acid level is independently associated with diabetes nephropathy as the authors found that DM patients who had a higher serum uric acid level (≥420 μmol/L for men and ≥ 360 μmol/L for women) also had a significantly higher prevalence of diabetes nephropathy, and a more severe proteinuria (high urinary albumin excretion) and worse renal function (lower estimated glomerular filtration rate).[1] We congratulate the success of the authors' publication, but we have some confusions about the current publication and hope to see the authors' kind response.

At first, this is a cross-sectional study, it is unknown whether a higher serum uric acid level is a cause or an end product in DM patients with diabetes nephropathy.[1] It may need a longitudinal study to give an answer. Of course, it is not easy to conduct a longitudinal study, but the authors could try to use the Cox proportional hazard methods or "receiver operating characteristic" (ROC) strategies to establish the correlation between serum uric acid level and proteinuria (qualitative data) or other targets, such as diabetes nephropathy and diabetes retinopathy. These methods are widely used to evaluate the correlation between studied items and targets.[2–4] As shown by authors, decreased estimated glomerular filtration rate might also impair the urine excretion of uric acid. Therefore, it is hard to claim the higher serum uric acid is independently associated with diabetes nephropathy.

According to the different prevalence of diabetes nephropathy and diabetes retinopathy, the authors supposed that the pathogenesis can differ. Could the authors kindly explain what does the different pathogenesis of diabetes nephropathy and diabetes retinopathy mean? We totally agree with the complex and complicated pathogenesis of DM-associated morbidities, but the threshold of end-organ damage is also different. For example, microvascular system damage occurs much early than macrovascular system does.

The above-mentioned questions do not criticize the scientific value of the authors' contribution, and we are looking forward to learning the authors' kind response.

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REFERENCES

1. Xia Q, Zhang SH, Yang SM, Zhu XL, Su S, Hu AP, et al. Serum uric acid is independently associated with diabetic nephropathy but not diabetic retinopathy in patients with type 2 diabetes mellitus. *J Chin Med Assoc* 2020;**83**:350–6.
2. Lee NR, Chang WH, Wang PH. Predictors in major burn patients. *J Chin Med Assoc* 2020;**83**:584.
3. Feng CJ, Lin CH, Tsai CH, Yang IC, Ma H. Adipose-derived stem cells-induced burn wound healing and regeneration of skin appendages in a novel skin island rat model. *J Chin Med Assoc* 2019;**82**:635–42.
4. Huang CY, Cheng M, Lee NR, Huang HY, Lee WL, Chang WH, et al. Comparing paclitaxel-carboplatin with paclitaxel-cisplatin as the front-line chemotherapy for patients with FIGO IIIC serous-type tubo-ovarian cancer. *Int J Environ Res Public Health* 2020;**17**:2213.

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