1. No.
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2. Title
   Elucidation of a Novel Parameter for Secondhand Smoke Exposure

3. Period
   2022-2024

4. Summary

Health damage caused by exposure of secondhand smoke (SHS) has become an important problem in our society. However, a useful parameter for SHS exposure is still not available. In this study, we aimed to investigate SHS exposure relating factors and elucidate a novel parameter for SHS exposure.

The study included apparently healthy university employees who underwent their health examinations. From the participants, physical parameters, biochemical parameters, including serum levels of αKlotho, IL-6, FGF21, and information on their lifestyle behavior was obtained. Associations between these factors and SHS exposure were assessed.

BMI, waist circumference, and triglycerides levels were increased in male participants with SHS exposure, and uric acid levels were increased in both male and female participants with SHS exposure compared to those in the participants without SHS exposure. SHS exposure associated with dietary habit, alcohol consumption, and smoking status, suggesting that individuals with SHS exposure are likely to possess unhealthy lifestyles. Although the differences of αKlotho, IL-6, and FGF21 levels were not significant between the participants with and without SHS exposure, male participants with SHS exposure tend to show low αKlotho levels than in the participants without SHS exposure.

The cohort study showed that male participants with SHS exposure were progressing health disorders. Since αKlotho levels tended to be low in the male participants with SHS exposure, they might develop health damages including hyperglycemia or diabetes in their future.