Sleep parameters by actigraphy and relationship between plasma melatonin and intestinal permeability in alcoholics

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TO THE EDITOR: In a recent issue of The American Journal of Physiology Gastrointestinal and Liver Physiology, Swanson et al. (3) recognized poor sleep of alcoholics and the inverse relationship between melatonin secretion and intestinal permeability or biomarker of endotoxemia in alcoholics. Namely, the decrease of plasma melatonin and its negative associated with lipopolysaccharide binding protein and lipopolysaccharide in alcoholics. The authors used actigraphy for sleep evaluation, and I have some concerns on their study.

First, the authors extracted several sleep parameters by actigraphy, named Spectrum Actiwatch. On this point, caution should be paid to the cutoff value of sleep/wake sensitivity on actigraphy, which was not described in the paper. The default cutoff value is set at 40 by the software, named Actiware, but there is no clear evidence of the application to alcoholics. Kushida et al. (2) described that the appropriate cutoff value of sleep/wake sensitivity on actigraphy was 20 for sleep efficiency and total sleep time, and I have also reported the same study outcome (1).

Second, sleep characteristics are influenced by age, obesity, and mental status such as depression. For example, van den Berg et al. (4) reported that total sleep time and sleep fragmentation were significantly associated with obesity. Since there is a significant difference on each variable between alcoholic and control subjects, appropriate adjustment or matching before the analysis is indispensable. Since the number of samples is limited, the sleep characteristics of alcoholics cannot be determined.

Finally, the authors recognized an inverse significant relationship between melatonin secretion and intestinal permeability in alcoholics. From the statistical point of view, the square values of correlation coefficient were all under 0.4, and evidence should be confirmed by further study.

DISCLOSURES
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AUTHOR CONTRIBUTIONS
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