

Letter to the Editor

Microalbuminuria and nonalcoholic fatty liver disease

To the Editor:

In a recent issue, we read with great interest the article by Yilmaz et al [1] reporting microalbuminuria and its association with liver fibrosis in nondiabetic patients with nonalcoholic fatty liver disease (NAFLD). The results are interesting and likely to contribute to our understanding of the relationship between microalbuminuria and NAFLD. However, we have some concerns about the data presented by the authors.

Firstly, many studies have suggested the relationship of microalbuminuria with NAFLD in patients with different glucose disorders [2,3]. Although it was stated in the article that diabetic patients were excluded from the study, there is no information regarding the glucose tolerance status of the subjects. We think that this is an important issue because NAFLD is associated with prediabetes [4] and microalbuminuria is strongly associated with prediabetes in subjects with NAFLD [2]. Secondly, as mentioned by the authors in the article, it has been suggested that there is an association between microalbuminuria and the components of metabolic syndrome (MetS) [5-7]. It is well known that insulin resistance and the MetS have been associated with an increased incidence of chronic kidney disease and microalbuminuria [7,8]. In addition, NAFLD is strongly associated with obesity, insulin resistance, hypertension, and dyslipidemia and is now regarded as a liver manifestation of the MetS. However, no data could be seen in the text regarding the proportion of subjects with MetS and the relationship of microalbuminuria and the components of MetS. Finally, the measurement of urine total protein and albumin is central to the diagnosis and management of subjects with kidney disease and in assessing the cardiovascular risk. For this reason, accurate assessment is vital to enable detection and management of patients with proteinuria. The measurement of albumin in a spot urine sample is an accurate, easy-to-perform, and recommended method in the clinical setting [9]. However, all abnormal test results must be confirmed in 2 of 3 samples collected over a 3- to 6-month period because of the known day-to-day variability in urinary albumin excretion [10].

We think all these points make the resultant comparisons and correlations questionable. Therefore, it would be appreciated if the authors could present some more data adjusted for major metabolic confounders. This could provide the readers of the journal clearer information in relation to the link between microalbuminuria and NAFLD.

Teoman Dogru

Halil Genc

Muammer Kara

Nuri Karadurmus

*Gulhane School of Medicine
Ankara, Turkey*

doi:[10.1016/j.metabol.2010.03.004](https://doi.org/10.1016/j.metabol.2010.03.004)

References

- [1] Yilmaz Y, Alahdab YO, Yonal O, et al. Microalbuminuria in nondiabetic patients with nonalcoholic fatty liver disease association with liver fibrosis. *Metabolism* 2010 [Epub ahead of print].
- [2] Hwang ST, Cho YK, Yun JW, et al. Impact of NAFLD on microalbuminuria in patients with prediabetes and diabetes. *Intern Med J* 2009 [Epub ahead of print].
- [3] Casoinic F, Sâmpolean D, Bădău C, et al. Nonalcoholic fatty liver disease—a risk factor for microalbuminuria in type 2 diabetic patients. *Rom J Intern Med* 2009;47:55-9.
- [4] Yun JW, Cho YK, Park JH, et al. Abnormal glucose tolerance in young male patients with nonalcoholic fatty liver disease. *Liver Int* 2009;29:525-9.
- [5] Chen J, Muntner P, Hamm LL, et al. The metabolic syndrome and chronic kidney disease in U.S. adults. *Ann Intern Med* 2004;140:167-74.
- [6] Chen B, Yang D, Chen Y, et al. The prevalence of microalbuminuria and its relationships with the components of metabolic syndrome in the general population of China. *Clin Chim Acta* 2010 [Epub ahead of print].
- [7] Choi HS, Ryu SH, Lee KB, et al. The relationship of microalbuminuria with metabolic syndrome. *Nephron Clin Pract* 2006;104:85-93.
- [8] Solbu MD, Jenssen TG, Eriksen BO, et al. Changes in insulin sensitivity, renal function, and markers of endothelial dysfunction in hypertension—the impact of microalbuminuria: a 13-year follow-up study. *Metabolism* 2009;58:408-15.
- [9] American Diabetes Association: Nephropathy in diabetes (position statement). *Diabetes Care* 2004;27:79-83.
- [10] Mogensen CE, Vestbo E, Poulsen PL, et al. Microalbuminuria and potential confounders: a review and some observations on variability of urinary albumin excretion. *Diabetes Care* 1995;18:572-81.