

## Author's reply

Dear Editor,

We appreciate the interest shown by the author in our article<sup>[1]</sup> and for the valuable comments. We take this opportunity to respond to the comments.

First, we would like to reiterate that we did not choose the first morning void spot urine to measure urinary microalbumin because it is the best test for microalbuminuria. Rather, we chose it, as it is the test being done routinely as a standard of care for monitoring urinary microalbumin levels in all patients at risk of developing diabetic kidney disease, in our institution and elsewhere in our country. Most recently, a large, similar study from South India, involving 1414 patients used the same test to measure microalbuminuria.<sup>[2]</sup>

The author states that urinary albumin creatinine ratio (ACR) in the first morning void is the preferred test to measure urinary microalbumin levels. There are reports in the literature concurring with the above statement<sup>[3]</sup> and those which refute it.<sup>[4,5]</sup> The argument in favor of the test used in our study is found in the report by Witte *et al.*<sup>[4]</sup> They found that the microalbumin levels found by the urinary albumin levels in the first morning void are comparable to those obtained by the urinary ACR and both test findings are comparable to the findings from the gold standard test, which is the urinary albumin levels from a 24-h urine sample.

The comment also states that the use of spot microalbumin will result in a higher false-positive diagnosis of microalbuminuria, while the use of urinary ACR will reduce this. However, the findings by Derhasching *et al.*, refute this.<sup>[5]</sup> They report that the occurrence of a false-positive diagnosis of microalbuminuria is comparable in both the tests. Although urinary ACR levels may be the recommended test for microalbuminuria by various clinical professional bodies internationally,<sup>[3]</sup> urinary microalbumin levels in the first morning void is the test still most frequently used as urinary ACR is more cumbersome and more expensive.<sup>[5]</sup>

The test that is being done to measure hemoglobin levels in our institutional laboratory (which is NABL accredited) is the Sulph hemoglobin method. This method measures the hemoglobin concentration by using lysed red blood cells on a hematology cell counter by spectrophotometry and not by electric impedance as mentioned in our article and as rightly pointed out by the author. The error in the terminology used is regretted.

**Suneetha Nithyanandam, Jyothi Idiculla<sup>1</sup>,  
Ajoy Mohan V K**

Departments of Ophthalmology and <sup>1</sup>Internal Medicine,  
St John's Medical College, Bangalore, India

**Correspondence to:** Dr. Suneetha Nithyanandam,  
Department of Ophthalmology, St. John's Medical College,  
Bangalore – 560 034, India  
E-mail: suneetha.n.lobo@gmail.com

and low hemoglobin as risk factors for the occurrence and increasing severity of diabetic retinopathy. *Indian J Ophthalmol* 2011;59:207-10.

- Rani PK, Raman R, Gupta A, Pal SS, Kulothungan V, Sharma T. Albuminuria and diabetic retinopathy in Type 2 diabetes mellitus. Sankara Nethralaya Diabetic Retinopathy Epidemiology and Molecular Genetic Study (SN-DREAMS, report 12). *Diabetol Metab Syndr* 2011;3:9.
- Miller GW, Bruns DE, Hortin GL, Sandberg S, Aakre KM, McQueen MJ, *et al.* Current issues in measurement and reporting of urinary albumin excretion. On behalf of the National Kidney Disease Education Program-IFCC Working Group on Standardization of Albumin in Urine. *Clin Chem* 2009;55:24-38.
- Witte EC, Lambers Heerspink HJ, de Zeeuw D, Bakker SJ, de Jong PE, Gansevoort R. First morning voids are more reliable than spot urine samples to assess microalbuminuria. *J Am Soc Nephrol* 2009;20:436-43.
- Derhaschnig U, Kittler H, Woisetschlager C, Bur A, Herkner H, Hirschl MM. Micro albumin measurement alone or calculation of albumin/creatinine ration for screening of hypertension patients. *Nephrol Dial Transplant* 2002;17:81-5.

### Access this article online

#### Quick Response Code:



**Website:**  
www.ijo.in

## References

- Ajoy Mohan VK, Nithyanandam S, Idiculla J. Microalbuminuria