Reviewer's report

Title: Prevalence of low glomerular filtration rate, proteinuria and associated risk factors in North India using Cockcroft-Gault and Modification of Diet in Renal Disease equation: an observational, cross-sectional study.

Version: 1 Date: 13 November 2008

Reviewer: Enyu Imai

Reviewer's report:

Singh et al described the prevalence of CKD in India by estimation by Cockcroft-Gault (CG) equation and by MDRD equation. The results are interesting; however, the method for estimating GFR may not be appropriate as the authors mentioned in the manuscript. The following issues are needed to be addressed.

Major points

1) The CG equation was originally made for estimation of creatinine clearance in White population. I am wondering whether the application of CG equation for Indian population to estimate GFR is appropriate. Generally, the eGFR estimated by CG is higher than the eGFR estimated by MDRD equation because it could estimate creatinine clearance. In contrast, MDRD equation may overestimate GFR if the authors did not use the Indian coefficient. This issue should be discussed by citing a manuscript written by Imai et al Am J Kid Dis Dec;50(6):927-37, 2007.

2) If the serum creatinine was not calibrated, the value of eGFR>60ml/min/1.73m² are not reliable. The authors should not show the data of CKD stage1 and stage 2.

3) For variables with normal distribution, t-test rather than Wilcoxon’s rank sum test is more appropriate.

4) In table 4, authors did not include possible confounding factors such as smoking habits, job status, and proteinuria though these are significant factors on univariate regression analyses in Table 2 and 3. Table 4 should be corrected with these variables.

Minor points

1) Is it appropriate to express eGFR < 60 (CKD stage: 3-5) as low eGFR or renal impairment? Isn’t it a bit subjective?

2) Delete vertical lines in all the tables.

3) Units of Hb are wrong: gm/dl must be corrected in Table 2 and 3.

4) Better to describe concentrations of Hb:11.0 than 11.

5) Need not to present the number of patients with serum creatinine > 1.8 mg/dl
for readability.

6) Figure 2 should be simplified: X axis for eGFR strata and Y axis for the proportion of proteinuria. Absolute number does not count for much.

7) Discussion is overly long; need to be shortened.

8) Generally speaking, data are expressed as the means ± SD, or the median [range or interquartile range] for normal and non-normal continuous variables, respectively, though in this article, variables are expressed as the median with range. For parameters such as BMI, means ± SD would be preferable.

9) Were there no interactions between variables?

10) Does odds ratio of 0 in age group 20-39 in Table 5 stands for reference? If so, "ref" is appropriate.

**Level of interest:** An article of limited interest

**Quality of written English:** Needs some language corrections before being published

**Statistical review:** Yes, but I do not feel adequately qualified to assess the statistics.