Reviewer's report

Title: Prevalence of hyperuricemia and relation of serum uric acid with cardiovascular risk factors in a developing country

Version: 1 Date: 13 January 2004

Reviewer: Jan A Staessen

Reviewer's report:

General

Conen and colleagues investigated uric acid in a cross-sectional study as cardiovascular risk factor.

The paper is in generally well-written, the statistical analysis seems sound, but I have a few suggestions for the authors:

Major compulsory revision:
· On page 6 (running over to page 7), the authors defined hyperuricemia as values above the sex-specific 75th percentile. This means that by definition nearly 25% of men and women should have hyperuricemia. In the last paragraph of page 7, the authors report a prevalence of 22.3% in men and 8.5% in women, which to me seems impossible.
· Page 9, line 7: "Incidence" should be replaced by "prevalence".
· In view of the skewed distribution of serum uric acid, the authors should consider a logarithmic transformation in parametric statistical procedures.
· The authors suspect that the use of diuretics might explain the association between uric acid and the metabolic syndrome. They should consider a sensitivity analysis, excluding subjects on diuretics.

Minor essential and discretionary revisions:
· The authors might add three recent references:
  o Hypertens 2001;37:1069-74.
  o CVR&R 2002;23:393-399,402.
· The authors might discuss Rick Johnson's hypothesis about tubular injury.
· Alpha-Adducin mutations influence tubular handling of uric acid. Presumably, the prevalence of mutated a-adducin is high in blacks. This idea might be worth to discuss.

What next?: Accept after minor essential revisions

Level of interest: An article of importance in its field

Quality of written English: Acceptable

Statistical review: No

Declaration of competing interests: