Reviewer's report

Title: Renal papillary calcification and the development of calcium oxalate monohydrate papillary renal calculi

Version: 2 Date: 24 January 2013

Reviewer: PETROS SOUNTOULIDES

Reviewer's report:

Dear authors,

You have submitted an interesting albeit small case series on stone forming patients looking into an association between stone composition and the presence of renal papillary calcifications. Although of little clinical significance and applicability, your paper is interesting and pending some minor essential revisions it should be reconsidered for publication. Below you will find some points and recommendations that in my opinion would improve the quality of your work.

1. I recommend changing the article's title so that the reader will understand that this is a case series.

2. In the key words section, replace "kidney" with "renal."

3. In the Introduction section, 1st line, replace "dependent on" with "a result of"

4. In the material and methods section the reader is somewhat confused on the methodology of your study. It is not clearly stated that all stones examined were spontaneously expelled. Please rewrite parts of this section pointing out the exact steps of your study. Were all 4 patients subjected to flexible URS after stone expulsion? Were there any stone or stone fragments retrieved during URS?

5. In the results section, last paragraph of page 5, replace the word "eliminated" with "retrieved from".

6. In the discussion section, page 7, 2nd paragraph, the correct spelling is "Randall's plaques. Randall's plaques characterize soft tissue calcifications found in the deep renal medulla skirting the surface of the epithelium of the papilla. There they may act as nidi for the formation of renal calculi. Although these plaques have been considered until now to be composed of carbapatite amorphous, according to recent findings they consist of carbonated calcium phosphate (ACCP). (Reference : X. Carpentier, D. Bazin, P. Jungers, S. Reguer, D. Thiaudière and M. Daudon, The pathogenesis of Randall's plaque: a papilla cartography of Ca compounds through an ex vivo investigation based on XANES spectroscopy, J. Synchrotron Rad. (2010). 17, 374-379)

7. In the discussion section last paragraph of page 7, please provide evidence in support of the theory of "injury" resulting in stone formation, especially in otherwise healthy patients. According to this theory it seems that everybody is
susceptible to stone formation..

8. Same section, last paragraph of page 7, please provide references in support of this statement "Although the development....inhibitors"

9. Same section, page 8, please provide reference in support of the assumption that some subepithelial calcifications do not progress further to forming stones. Also it would be interesting to know if there is any literature on the actual rate of those calcifications in the general stone-forming and non-stone forming population.

I hope that you might find those suggestions useful.

Sincerely,

Petros Sountoulides, MD

Level of interest: An article whose findings are important to those with closely related research interests

Quality of written English: Acceptable

Statistical review: No, the manuscript does not need to be seen by a statistician.

Declaration of competing interests:

I declare that I have no competing interests