Reviewer’s report

Title: Seroprevalence of Streptococcal Inhibitor of Complement (SIC) suggests association of streptococcal infection with chronic kidney disease.

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Reviewer: Claire Turner

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The authors have demonstrated that patients with chronic kidney disease and end-stage renal disease have greater seroreactivity to streptococcal inhibitor of complement compared to healthy controls. SIC is known to be unique to M1 and M57 strains and although M1 is prevalent in other countries particularly USA and UK it is not a leading cause of infection in India. It is surprising therefore that there is such a high level of seroreactivity to SIC in patients with CKD or ESRD compared to healthy controls.

Minor essential revisions

The authors have conducted a small epidemiological study swabbing school children for GAS. They found 28 different emm types but it would be nice to know how many different isolates were found and what the different emm-types were. The authors say ‘in some studies emm12 was recovered’ but they do not say if that was the case in this study.

The higher level of seroreactivity to SIC compared to control healthy subjects indicates that it is SIC-carrying strains that are associated with CKD or ESRD. Although in school children the prevalence of these strains are low but what about in patients? Do the authors know if the patients with CKD or ESRD who are presumably regularly attending the clinics at KEM hospital are exposed to or carrying GAS?

Discretionary Revisions

Figure 1: I think it might be easier to understand if the authors only showed the percentage that were positive for SIC and DRS rather than include those that were negative.

Although not essential, it would be interesting to know if the patients with high level of SIC antibodies also had high levels of anti M1 antibodies. In other countries where M1 is a leading strain the levels of SIC seroreactivity are much higher (Hoe et al 2000) at 43% and yet not all these people have CKD or ESRD. This suggests maybe there is something different about the strains in Mumbai that carry the SIC gene.

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