Reviewer’s report

Title: Sex steroids do not affect shigatoxin cytotoxicity on human renal tubular or glomerular cells

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Reviewer: Prof Peter Mathieson

Level of interest: A paper whose findings are important to those with closely related research interests

Advice on publication: Other (see below)

Comments; Discretionary revisions
1. This paper tests the hypothesis that effects of sex steroids on renal cells could explain the fact that young children are the predominant age group affected by diarrhoea-related haemolytic uraemic syndrome (HUS). The paper is clearly expressed and the results are convincing. The results are negative, so that the paper provides no support for the hypothesis. I do not find this surprising: it seems much more likely to me that the age range of the predominantly affected subjects is explained by host defense factors and/or acquisition of the enteric infections predisposing to HUS. There are marked differences in HUS incidence between very young children and older (but still pre-pubertal) children: these could not be explained by sex steroids. More justification of the hypothesis is required, plus discussion of alternative explanations.
2. Chosen concentrations of sex hormones are not explained or justified by references to other literature. Simply referring to "physiologic" and "pharmacologic" concentrations does not allow the reader to be sure that the range of tested concentrations is adequate.
3. Tables 1-3 are difficult for the reader to interpret: graphical representation of the data would be more accessible, alternatively the results could be summarised as brief text.

Compulsory revisions
There are errors in the text with Tables 1 & 2 (pages 16 & 17) where the abbreviations for endothelial and epithelial cells have been transposed.

Competing interests:

None declared.