Reviewer’s report

Title: A descriptive study of adrenal crises in adults with adrenal insufficiency: increased risk with age, in women and in those with bacterial infections

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Reviewer: Michael O'Reilly

Reviewer's report:

Rushworth and Torpy present a well-written epidemiological study on the incidence of adrenal crisis (AC) amongst patients with adrenal insufficiency (AI) in New South Wales between 2000 and 2011. Despite the limitations associated with this form of patient data collection, there are enough important messages in the data presented to be of interest to internists, endocrinologists, health strategists and primary care physicians.

The limitations of the study are obvious and acknowledged by the authors:

1. No information of recurrent patient episodes to inform on predictors of recurrent AC in the study population.
2. Poor stratification of patients with AI into those with primary and secondary hypoadrenalism.
3. No data on the incidence of newly-diagnosed AI in the population in question.

There are a number of minor points which require attention:

1. Page 1 - Background (line 67): A more accurate definition of adrenal crisis is required here.
2. Page 1 - Background: The authors need to more succinctly outline gaps in the current literature in relation to the clinical question posed in the third paragraph, before going on to clearly state their aims and hypothesis.
3. Page 9, Line 179 - incidence of bacterial v viral infection - please provide a p-value.
4. Page 10, Line 200 - in the 53 patients with T1DM, is it known if this a new or pre-existing diagnosis?
5. A dramatically higher proportion of patients admitted with AC were female compared to male (as reflected in the manuscript title) yet there is little elaboration on this finding in the results or discussion. It is unlikely than an increased incidence of UTI in elderly females accounts exclusively for this sex discrepancy. This finding and its potential implications should be discussed in better detail.

Level of interest: An article of importance in its field
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.