Reviewer’s report

Title: ICU-treated influenza A(H1N1) pdm09 infections more severe post pandemic than during 2009 pandemic: a retrospective analysis

Version: 0 Date: 27 Jul 2017

Reviewer: Rita Linko

Reviewer’s report:

This study compares influenza A(H1N1) virus infections treated in ICU during pandemic and postpandemic periods. Although being a single center study with quite a low patient number, this study includes more postpandemic periods than previous studies.

Mainly the manuscript is fluent and compact, but several, mostly minor issues needs to be corrected or commented.

Abstract:

The abstract does not include results or conclusions of vaccination rate, although it was one of the objectives of the study and reported and discussed in the main text.

References in background and discussion:

Row 55: ref 5,6: should it be 5 and 10. Ref 6 reports results from a small single center Turkish study during only pandemic period 2009-2010. Check also row 163.

Check also references on row 181. E.g. ref 23: morbidity and mortality greater during the initial season, is the severity of ICU patients reported?

Abstract, Methods, first sentence: add missing word.

Abstract, Methods: Data expressed as median (25th-75th percentile): However, percentiles are not reported for APACHE II, SAPS II and SOFA score. Percentiles for APACHE II and SAPS II are also missing in text on page 6.

According to data registration, data is expressed as median (25th-75th percentile). In text and tables 1-3 data is also expressed as number (%) and as mean (range) in table 4. See also below comment table 4.

Were continuous parameters normally distributed and suitable for analysis with Student's t-test?
Use score, scale, point or index consistently throughout abstract, main text, figures and tables, according to the original scoring systems.

Sentences on rows 53-55 and 152-155 are not fluent.

Row 114: The list of most commonly detected bacteria includes 21 of 22 mixed influenza and bacterial infections. Why not as well report all detected bacteria. Or is there an error in the number of patients. What is the relevance of reporting pneumococcal antigen-positive urine (table 2)?

Discussion:

Row 156 Patients had several underlying diseases. Does this mean that each patient had several underlying diseases? According to study parameters severity of underlying diseases was collected. Underlying diseases are not reported or referred to in results section. Data can be found in table 1, but without disease severity.

Row 160: according to table 1, the mortality discussed here refers to ICU mortality. However, in results only 6 month mortality is reported and in study parameters only hospital mortality and 6 month mortality were recorded. Why not 6 month mortality instead of 180 day mortality in table 1?

Row 163-164: patients…began?

Row 177: most of them had disabilities. Which disabilities? Where are the disabilities reported?

List of abbreviations: Is ARDS or CDC used in text? Several other unlisted abbreviations are used.

Table 1: 6 month mortality as in results and study parameters. Abbreviations TISS, BMI, LOS and SAPS II missing.

Table 3: PaO2/FiO2 could be in included in clinical data (table 2). Median PaO2/FiO2 quite high. However, 4 postpandemic patients were treated with ECMO. What was the indication for ECMO? Is the number of ARDS patients available?

Table 4: Which values are median and which mean? Is the duration of ventilation in hours? Abbreviation SOFA missing.

Figures 1 and 2: axis labels missing

Are the methods appropriate and well described?
If not, please specify what is required in your comments to the authors.

Yes
Does the work include the necessary controls?
If not, please specify which controls are required in your comments to the authors.

Yes

Are the conclusions drawn adequately supported by the data shown?
If not, please explain in your comments to the authors.

Yes

Are you able to assess any statistics in the manuscript or would you recommend an additional statistical review?
If an additional statistical review is recommended, please specify what aspects require further assessment in your comments to the editors.

I am able to assess the statistics

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Please indicate the quality of language in the manuscript:

Needs some language corrections before being published

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