Reviewer's report

Title: Epidemiology and risk factors of patients with types of Acute Coronary Syndrome presenting to a tertiary care hospital in Sri Lanka

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Reviewer: Larisa Burke

Reviewer's report:

BCAR-D-16-00660R1

Review of resubmission

Manuscript Title: "Epidemiology, Risk factors and Outcome of patients with types of Acute Coronary Syndrome presenting to a Tertiary care Hospital in Sri Lanka"

Thank you for the opportunity to review this manuscript. The manuscript discusses age, gender and risk factor differences by type of ACS diagnosis in a hospital in Sri Lanka.

Overall comments

Should write out words the first time an abbreviation is used. Should run spell check on document as some words are misspelled (statisticaly, compaired, NTEMI). Abstract and intro mention assessing ACS outcomes as an aim of the manuscript but there are only a few sentences at the end of the results section and discussion related to patient outcomes. Discussion of ACS outcome should possibly be removed as it is not really a focus of the manuscript. There is no control group of people without ACS to serve as a comparison for the rates of risk factors. Authors should be careful to only state that the rates of risk factors like smoking are different between the ACS groups. Authors should not imply that because a rate for a risk factor was lower for one type of ACS over others that there is no risk for that type of ACS diagnosis. For example, even if STEMI patients had a lower percentage of hypertension than UA/or NSTEMI this does not mean that hypertension is not a risk factor for STEMI.

Abstract

Results do not assess whether risk factors are different by age and sex (2nd sentence).

Introduction

The introduction switches terms frequently which creates confusion as to what is being discussed (IHD-ischemic heart disease, CVD-cardiovascular disease, CHD-coronary heart disease).
Data Analysis

How was it determined what variable would be used in the bivariate analysis?

It is unclear what statistical tests were used to assess differences in age between ACS groups. Table 1 and figure 2 have different p-values for age by diagnosis comparison but what test was used for each is unclear.

Results

Figure 1 shows age by diagnosis type, not age by sex (2nd sentence).

When reporting sex by ACS type please include n's per group. These are not included anywhere in the manuscript.

Table 1

Include p-value for type of chest pain.

Figure 1

Caption should be removed. Results should not be reported in the caption of a figure.

Figure 2

Results would be clearer as counts instead of percents. Figure makes it appear that males have higher rates of STEMI versus NSTEMI and UA but this is not the case as per written results.

Discussion

Results from data do not assess whether risk factors are different by age and sex but differences in risk factors by sex and age make up the 3 and 4th paragraphs of the discussion. Cutting these sections would improve the discussion. Discussion should give details fleshing out findings from data not add new information.

First 3 sentences in paragraph 7 discuss differences in ACS risk factors for Sri Lanka versus other countries. These sentences would fit better before the start of the final paragraph which is also discussing this topic.

Paragraphs 6-8 discuss risk factors linked to ACS but could be better organized. Paragraph 8 is particularly difficult to follow. First sentence and last 2 sentences of paragraph do not fit with
A first sentence that introduces what the paragraph is discussing would help. "Defers" should be "differs".

Last paragraph in discussion is well written and a good summary. Should remove the statement about risk factors differing by age and sex in the paragraph.

**Conclusion**

Conclusion well written. Remove "age, sex and" from first sentence. Remove "more and" from "more and more".

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

No

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

No

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

No

**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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