Reviewer's report

Title: Non-diagnostic autopsy findings in sudden unexplained death victims

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Reviewer: simone bonetti

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Yazdanfard et al. describe the autopsy findings of 99 sudden unexplained death patients and report that 2/3 of the victims had non-normal but non-diagnostic autopsy findings and suggest that these findings could be early markers of structural heart disease.

The manuscript is definitely interesting but requires some further specifications to improve the accessibility of the data and strengthen the conclusions.

1) In the definitions section you report that congenital heart defects are defined as presence of "congenital defects, including but not limited to persistent foramen ovale and septal defects, but not considered a likely substrate for ventricular arrhythmias or heart failure-related death": patent (not persistent) foramen ovale is considered a normal finding in children under 6 years of age and this should be specified in the definition.

2) In the results -&gt; previous health status section the percentage as given are deceptive. You correctly describe your population as having had cardiac assessment in 21% of cases but when you describe the exams performed you should give the percentage related to the cardiac assessment population and not the whole, as you say "... of these victims..." implying referral only to those 21.

3) In the results -&gt; autopsy findings section you describe a relation between age and cardiac mass. Comparing data about a body measure and age in a population comprising paediatric patients requires correction for some measures of body size (in this case BSA would be the best choice). It's unclear if you compared cardiac mass or cardiac mass corrected for BSA in the text. Should you have performed the analysis on the raw data it would be advisable to repeat it with the corrected ones.
5) In the results-autopsy findings section you describe the presence of minor congenital defects in 5 victims and state that 3/5 had patent (not persistent) foramen ovale (PFO). You should specify the age of those patients because PFO is considered a normal finding in patients under the age of 6. If some of those 3 patients is &lt;6 years old should be considered a normal finding in my opinion.

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

Quality of written English
Please indicate the quality of language in the manuscript:

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