Review of: "Comparison of Clinical and Radiological Diagnosis with Autopsy Findings in Fatal Traffic Accident Cases"

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Potential competing interests: No potential competing interests to declare.

The study aimed to assess the alignment of clinical/radiological and autopsy findings of diagnoses, more specifically the injury diagnoses. This aim is very useful and addresses a very justifiable research question.

Analysis was not done at the person level. Some people had multiple injuries to the same and/or different body regions. Injuries were grouped into injury types based on the injured body region (allowing the same person to be countable into different groups), then the kappa analyses were used to assess the consistency in each group separately.

Sample size estimation was based on estimating a proportion (i.e., estimating the concordant proportion), but the main analysis in the article is not about estimating a proportion. The main analysis done was estimating the agreement using the kappa statistic and testing those estimates against (unspecified and unclear) null values. The authors should have done the sample size estimation for the analyses done.

Each kappa statistics results table included a P-value column. Readers cannot interpret these P-values without knowing the null and alternative hypotheses associated with them. The authors haven't specified them. Were they tested for the existence of any level of association (i.e., H0: kappa=0)? If so, a statistically significant P-value says the existence of a kappa statistic that is different from zero; how useful is that result? The authors' interpretations totally ignored this aspect. Ideally, H0 should represent the minimum acceptable level of agreement; it can be different between injury types, and the authors should have specified them. P-values are not meaningful without knowing to what hypotheses they are related.

Information in the tables is repeated throughout the main text. There is no need to present the same information in different formats.

Based on the observation of significant differences in diagnoses between clinicians' findings and autopsy findings, the authors conclude, "findings highlight the value of autopsy feedback for emergency trauma care." How can results from an autopsy, which are not available at the time of trauma care, be incorporated into that person's trauma care?