Reviewer’s report

Title: An automated CPR device compared with standard chest compressions for out-of-hospital resuscitation

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Reviewer: Christer Axelsson

Reviewer’s report:

- Major Compulsory Revisions
  1. The manuscript are clear written, the statistical method are very interesting and well described but performs a lower grade of evidence than a randomized study (which the authors mention in the limitation). Unfortunately, the authors have not reported the most important parameter; “Time from arrival to start Autopuls”. It is very vital to know how the paramedics use the device. Previous studies have shown that the device often was brought late, in stage two. This lack makes the result impossible, for the reader, to interpret and unfortunately the manuscript of minor interest.

  2. The result from the study was not significant; In spite of this fact the authors attach importance to note that the group admitted alive to hospital is larger among the group receiving A-CPR. Further, they avoid mention the tendency of low survival rates to hospital discharge among the same group. This in spite of that the study made of Hallström et.al was interrupted of similar reasons.

  3. The discussion and conclusions are like earlier mentioned not well balanced and adequately supported by the data?

  4. The last two sentences in “setting” have to be clarified. Was the devices placed on vehicles with mixed competence (ALS and Mica)???

- Minor Essential Revisions
  1. The reference list has to be looked over; some names appear twice in the same reference.

  2. In the result, the references to the tables have to be looked over.

- Discretionary Revisions

I miss a lot of articles from the use of mechanical chest compressions in the prehospital setting. The present study had been more interesting if the authors reported clinical advantages and disadvantages during the implementation of the device e.g how often was the device not brought to the patient with a cardiac arrest. Further, the authors have to read the press release from the Circ study conducted by Lars Wiik. The study was stopped the present spring after 4500 patients randomized to Autopuls or standard CPR. The result was significant equal between the groups when the interim board stopped the Circ study.

Level of interest: An article of limited interest
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' / Regards Christer Axelsson