Reviewer's report

Title: The Role of Rigid Indirect Videolaryngoscopy in the Successful Orotracheal Intubation of Adults: A Systematic Review of Randomized and Non-Randomized Trials.

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Reviewer: Jochen Hinkelbein

Reviewer's report:

This article is a systematic review comparing the role of rigid indirect (video) laryngoscopes for endotracheal intubation in adults.

The authors have made considerable efforts to find, assess and grade – according to the respective level of evidence – all studies comparing rigid indirect laryngoscopes to standard (direct) laryngoscopy in adults.

P4 L23: incidence of difficult intubation does not only depend on definition and patient selection, one of the most important aspects is experience of the laryngoscopist (e.g. first year trainee vs several years of experience in ENT anaesthesia). There is much recent literature on this topic, please include and clarify this important point.

P6 exclusion criteria.
You have excluded manikin studies without further discussing this.
On the one hand, it is desirable to use only data gathered from studies performed with humans, since the airways from manikins are still far away from reality. On the other hand, due to the enormous variations of the human anatomy, and the enormous variations being created by using different drugs and doses for intubation (especially when thinking of stepping back to spontaneous breathing in case of expected difficult intubation), the manikin provides the only standardized and thus non-biased “airway” for comparing different devices. When excluding manikin studies, these problems have to be discussed.

P7 grading view at laryngoscopy
Please make this paragraph shorter and more concise. The grade of view is not as substantial as in direct laryngoscopy, and of limited significance for intubation success – a good indirect view does not guarantee easy and successful intubation. As you correctly state later in the discussion, the C/L grading is not useful for video laryngoscopes, and an alternative grading should be used in future.

P8
MP - Please give explanations for all abbreviations at their first use.

P9 L3 separately
P12 L1
Time to glottic view is often described, but more or less only of academic interest when comparing video laryngoscopes, because a good view of the glottis does not necessarily mean that endotracheal intubation can be performed easily and quickly as in direct laryngoscopy. Intubation success alone doesn’t make a good endpoint either. Especially when bag-mask-ventilation is difficult or not wanted (rapid sequence induction), time to intubation is the time that matters clinically. Please emphasize this.

L22: The recommendation to use video laryngoscopes to achieve a higher percentage of C/L I scores is questionable. You state yourself that the Cormack/Lehane classification is a useless classification for video laryngoscopes. Besides, a C/L I is not essential for endotracheal intubation.

P13 L9: Again, there is no need for a C/L grade I view, as long as the glottic structures can be securely identified and the tracheal tube can be inserted successfully and timely. I do not think that these strong recommendations can be made when not considering time needed for successful intubation.

P14: With only retrospective data available, the strong recommendation for a specific device should be weakened.

Forest plots of your results – e.g. one for each group – would be desirable to have a better overview of the results.

P15: You state that devices were used by appropriately experienced users. Did you check that for each study included? How do you define appropriate experience? (See Bernhard et al, developing the skills of endotracheal intubation, AAS 2012) Experience of the user is of outstanding importance and should be discussed. I do not believe that it can be stated that all users of the video laryngoscopes were “appropriately experienced”.

Conclusion:
As stated earlier, please weaken your strong recommendations for specific devices.

**Level of interest:** An article of importance in its field

**Quality of written English:** Acceptable

**Statistical review:** Yes, but I do not feel adequately qualified to assess the statistics.

**Declaration of competing interests:**

'I declare that I have no competing interests'