



Comparison of Efficacy of Pressure Controlled vs. Traditional Manual Mask Ventilation for Newborn Resuscitation – A Simulation-Based Pilot Randomized Control Trial: Correspondence

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Received: 14 December 2023 / Accepted: 18 January 2024
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To the Editor: We commend the authors, Kalane et al. for publishing an intricate Pilot RCT in IJP [1]. We wish to raise some relevant points concerning the study.

Contrary to authors' claims, similar study has already been published [2]. It is unclear whether the authors aimed to assess the effectiveness of modality, proficiency of resuscitator, or combination of both.

The authors' reference to "Professionals who regularly participate and certified" appears confounding, as variations in frequency of participation, certification level, and certification date could introduce bias. Stratifying participants based on experience, given the broad range (<1 y to >20 y), could have alleviated this.

Manual methods showed delay in chest rise despite certified resuscitators administering comparable or high average pressures. This raises questions about whether mask seal was established. It's not clear why participants were given a target range (40 – 60 bpm) when ventilator rate was set at fixed rate. Chest rise is a dynamic process, occurring over a period of time. It is not clear which exact time was uniformly taken for assessment, onset or maximal chest rise.

Using pressure monitor to assess the adequacy of resuscitation might be inferior to the other standard ventilator parameters which could have been measured with a pressure differential pneumotachometer [3].

Instead of NASA TLx which is not validated for medical tasks, more objective functional near infrared spectroscopy (fNIRS) of the frontal cortex would have been a reliable alternative [4].

Confounding factors like time taken for setting up the ventilator, applying the mask effectively, changing settings

during resuscitation if needed, size of mask, skills levels and experience of personnel have been overlooked.

Using a ventilator which has limitless capabilities in NICU for a limited purpose in delivery rooms will amount to suboptimal utilization and is unaffordable in resource limited setups. Instead, task-specific, stand-alone equipment can be developed.

Declarations

Conflict of Interest None.

References

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Publisher's Note Springer Nature remains neutral with regard to jurisdictional claims in published maps and institutional affiliations.

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