

LETTERS TO THE EDITOR

Letter regarding Salma et al. “Vital signs changes during different dental procedures: A prospective longitudinal crossover clinical trial”



To the Editor:

I read the article by Salma et al.¹ entitled “Vital signs changes during different dental procedures: a prospective longitudinal crossover clinical trial” published in the January 2019 issue of *OOOO* with both interest and disappointment. The article provides evidence for the well known practice that routine dental procedures combined with local anesthesia is safe for patients classified as ASA I (American Society of Anesthesiology physical status classification). This study demonstrated that the administration of up to 3.6 mL of 2% lidocaine with epinephrine (1:80,000) in the context of supragingival scaling, restorative treatment, or routine exodontia is associated with very minor changes in temperature, heart rate, systolic blood pressure, diastolic blood pressure, mean arterial pressure, heart rate, and oxygen saturation in healthy patients. The recordings at 3 time points (baseline, anesthesia, and intraoperative) add scientific rigor to the study.

What is disappointing is the lack of acknowledgment, in the introduction of the article, of key studies that previously examined cardiovascular responses induced by local anesthesia and dental treatment.²⁻⁶ The introduction also lacks a rationale, based on the current state of the field,⁷ and a hypothesis for the study. Finally, there is no lack of information on whether anxiety was measured, whether patients experienced discomfort during the procedure, whether anxiety or discomfort was associated with tachycardia, and whether the procedures were delivered to patients in the recumbent or upright position.^{8,9} Inclusion of these details¹⁰ could benefit the publication.

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Reply to Letter to the Editor regarding “Vital signs changes during different dental procedures: A prospective longitudinal crossover clinical trial”



To the Editor:

The authors would like to thank the journal for the opportunity to reply to the letter to the editor regarding the recently published article by Salma et al.¹ entitled “Vital signs changes during different dental procedures: a prospective longitudinal cross-over clinical trial.”

In addition, we would like to thank Professor Craig S. Miller for his interest in our paper and his valuable comments that will add to the scientific content of the study. With regard to the concerns of Professor Miller, we hope the following reply will suffice.

The first concern was the “lack of acknowledgment, in the introduction of the manuscript, of key studies that previously examined cardiovascular responses induced by local anesthesia and dental treatment.” In fact, at least 2 of these studies were acknowledged in our article under the Discussion section. The studies by Paramaesvaran et al.² and Hollander et al.³ were referenced in our study under reference numbers 35 and 42, respectively.¹ As for the other studies, similar research papers were acknowledged in our article⁴⁻⁶ because we believed they covered the same research questions more effectively.

The second concern was “the introduction also lacks a rationale for the study based on the current state of the field and a hypothesis.” We agree about the hypothesis part. However, because our study included extensive testing, we could not add all of our hypotheses in the Introduction section. The main null hypothesis was as follows: Routine dental treatment in otherwise healthy adults does not induce alterations in the vital signs.

The third concern was “there is a lack of information on whether anxiety was measured, whether patients experienced discomfort during the procedure, whether anxiety or discomfort was associated with tachycardia, and whether the procedures were delivered to patients in the recumbent or upright position.” We disagree about the first point on this list because we did include a clear statement under the Limitations section of the article as follows: “Another limitation was the lack of assessment of the anxiety level in the patients before each procedure.”¹ We agree that adding the information

regarding anxiety levels would have added value to the report but would have caused some statistical complications, too. In addition, our aim was to test the changes in vital signs regardless of the anxiety level because there will be some degree of anxiety during routine dental treatments. With regard to patient positioning, the semi-upright position was used for all of the procedures performed.

We hope we have answered all of the concerns, and we are glad that our article has drawn attention and motivated discussion that will benefit the reader.

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