ABSTRACT

Introduction: Several studies have been done to compare the successful methods of direct laryngoscopy and video laryngoscopy due to the importance of the correct endotracheal intubation and its possible complications. Regarding quite different and even contradictory results among the studies, the present study was done with the aim to compare the evaluation of the successful intubation and the possible complications between the considered methods fulfilled by the first-year anesthesiology residents.

Methodology: This double blind clinical trial study, which was conducted in Fatemi Hospital of the city of Ardabil in 2018 and 2019, with the participation of 132 patients who included in the study by the consecutive sampling and were randomly divided into two groups, i.e. the direct laryngoscopy and video-laryngoscopy groups. After induction of anesthesia, laryngoscopy was performed by the trained first-year resident and the intubation process, hemodynamic complications, and physical complications during and after surgery due to the intubation were recorded in the considered questionnaire. The obtained data were compared in a significant level of less than 0.05% after being entered in SPSS (ver. 22) statistical software by the independent t-test and the Chi-square test.

Results: The results of this study, considering 132 patients with the average age 33.15 $\pm$ 8.20 and mean BMI of 29.80 $\pm$ 3.22, indicated the observation of statistical differences between the two groups in the variables of heart beat, systolic and diastolic blood pressure, arterial blood oxygen saturation rate, intubation time, duration of correct intubation, number of attempts for the successful intubations, tooth damage, lip and gum injury, straining, stridor, and also post-operation complications that in all of these variables at the time of intubation and minutes one and five after that, also duration of successful intubation and the number of attempts for that, patients undergoing intubation with videolaryngoscopy needed more time to perform it.

Discussion and Conclusion: Using video-laryngoscopy required longer duration and encountered more (hemodynamic and physical) complications for the endotracheal intubation as compared to the direct laryngoscopy.

Key Words: Intubation; Intubation Complications; Video-Laryngoscopy; Hemodynamic Complications; Direct Laryngoscopy