

## عنوان مقاله:

Effect of Positioning on the Pressure of Endotracheal Tube Cuff Filled with Air versus Saline: A Double-blind Randomized Clinical Trial

## محل انتشار:

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## خلاصه مقاله:

Background: Control and maintenance of endotracheal tube cuff pressure and prevention of sore throat are major concerns in post-anesthesia care. Aim: This study aimed to evaluate changes in the pressure of the endotracheal tube cuff filled with saline versus air and post-anesthesia sore throat when the position is altered from supine to lateral. Method: This double-blind randomized clinical trial was performed on 60 participants under lateral hip replacement surgery in an educational, research, and treatment center in the northeast of Iran in 2018-2019. After intubation, the cuffs of the intervention and control groups were filled with saline and air, respectively. Cuff pressures and Visual Analog Scale of sore throat were measured and analyzed using repeated measures ANOVA and Pearson's correlation coefficient in SPSS software, version 20. Results: The mean ages of the participants in the intervention and control groups were  $45.8 \pm 11.6$  and  $40 \pm 13.1$  years, respectively. Changes in the cuff pressure of different time points were statistically significant in both intervention ( $P=0.03$ ) and control ( $P=0.02$ ) groups. Based on the results of the independent sample t-test, the pain score was significantly different between the intervention ( $0.1 \pm 0.4$ ) and control ( $1.1 \pm 2.1$ ) groups 12 h post-surgery ( $P=0.01$ ). The results of the Pearson's correlation coefficient revealed a significant association between the pain score 12 h post-surgery and pressure difference of the fifth and first stages in the control group ( $r=0.585$ ,  $P=0.001$ ). In addition, the 12-h pain score and the pressure difference of the fifth and fourth stages were also significantly correlated in the control group ( $r=0.479$ ,  $P=0.01$ ). Implications for Practice: Based on the findings, in the lateral-position hip surgery, the use of saline to fill the endotracheal tube cuff could lead to better control of cuff pressure and may also reduce the postoperative sore throat.

## کلمات کلیدی:

Intubation, patient positioning, Sore throat

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