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| ORIGINAL ARTICLE |

**The Accuracy of Endotracheal Intubation by Pre-Hospital Emergency Personnel; a Cross-Sectional Study**

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| Abstract |  |
| **Introduction:** Endotracheal intubation is one of the most common measures for airway management in patients with cardiac arrest and decreased consciousness. Therefore, this study was designed to investigate the rate of correct endotracheal intubation by pre-hospital emergency personnel. **Methods:** In this cross-sectional study, patients who were intubated by pre-hospital emergency personnel outside the hospital and then transferred to the emergency departments of Loghman Hakim, Imam Hossein and Shohadaye Tajrish hospitals from March 2018 to March 2019 were studied regarding the accuracy of intubation. **Results:** 41 patients with mean age of 64.39 ± 18.64 years (range = 2 to 98) years who were intubated and referred to the emergency department by pre-hospital emergency were studied (73.2% male). The average work experience of the evaluated personnel and the mean years of their training were 7.41 ± 2.70 (range = 15 to 3) years and 1.61 ± 1.74 (range = 0 to 5) years, respectively. The mean distance from place of intubation to the emergency department was 30.48 ± 13.21 (range = 10 to 50) Km. Accuracy of intubation was confirmed in 38 (92.7%) cases. There was no significant relationship between the accuracy of intubation and patient’s sex (p = 0.792), patient’s age (p = 0.639), place of intubation (p = 0.216), time of intubation (p = 0.422), patient’s distance to hospital (p = 0.080), cause of intubation (p = 0.755), patient’s circulation status (p = 0.767), staff’s work experience (p = 0.958), staff’s training (p = 0.536), or educational level of the intubator (p = 0.343). **Conclusion:** The rate of incorrect intubation by the pre-hospital emergency staff was estimated to be 7.3%. None of the factors, including patient’s sex, patient’s age, place of intubation, time of intubation, patient's distance to hospital, cause of intubation, patient's circulation status, staff’s experience, staff’s training, and intubator’s educational level, significantly correlated with accuracy of intubation. |
| **Keywords:** Intubation, intratracheal; emergency medical services; capnography; cardiopulmonary resuscitation |