

Success Rate of Endotracheal Intubation Using Inline Stabilization with and without Cervical Hard Collar; A Comparative Study

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Abstract : Introduction : Application of a rigid cervical collar may interfere with the laryngeal view, and potentially lead to failed endotracheal intubation (ETI). This study aimed to compare intubation success rates while performing inline stabilization with and without cervical hard collar. Methods : This randomized prospective comparative study included paramedics working in the Department of Emergency Medicine, Ramathibodi Hospital, Mahidol University, Bangkok, Thailand to compare the success rates of endotracheal intubation on manikin using inline stabilization with and without cervical hard collar. Results : 125 participants were evaluated; 63 in the rigid cervical collar and 62 in the non-cervical hard collar group. The rate of successful intubation was significantly higher using manual stabilization without cervical hard collar (61 (96.8%) vs. 55 (88.7%); $p=0.048$). The time required to successfully perform intubation was also shorter, with manual stabilization only (14.1 ± 20.9 vs. 18.9 ± 29.0 ; $p = 0.081$). Conclusion : It seems that, removal of the rigid cervical collar during ETI in patients with suspected traumatic spine injury could increase the intubation success rate.

Keywords : ntubation, Intratracheal, Spinal Injuries, Multiple trauma

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