

Print

Close

A537

October 18, 2009
2:00 PM - 4:00 PM
Room Area N

An Evaluation of Airwayscope-Assisted Intubation Using Parker Flex-Tip or Standard Endotracheal Tube

** Hirotohi Kitagawa, M.D., Ph.D., Yasuhiko Imashuku, M.D., Mayumi Yuasa, M.D., Yuko Ishikawa, M.D., Toji Yamazaki, M.D., Ph.D.
Department of Anesthesiology, Shiga University of Medical Science, Otsu, Shiga, Japan

Introduction: A new video laryngoscope, Airwayscope (AWS: Pentax, Tokyo, Japan) has an integrated glottis viewing and expects the anesthetist to achieve reliable intubation of endotracheal tube. Standard endotracheal tube (ST) advances only straight along AWS tube guidance channel (intlock blade) for the target point. Therefore side-beveled tip of ETT occasionally strikes on the structures around the vocal cord, especially right arytenoid. The Parker Flex-Tip tube (PT: Parker Medical, Englewood, CO, USA), has a soft, flexible, curved, centered, distal tip. This superior, beveled tip tends to smoothly move over the arytenoid and prevent trauma to the laryngeal structures. We have evaluated the efficacy of AWS-assisted intubation using PT and ST in clinical practice.

Methods: Forty patients scheduled for elective anesthesia using orotracheal intubation were randomly assigned into two groups, group ST (Portex, tube size 7.0-8.0 I.D) and group PT (tube size 7.0-8.0I.D). The total time to intubation (TTI) was recorded as the time from insertion of AWS intlock into oropharynx to the intlock withdrawal from the oral cavity. Further, numbers of attempted intubation, incidence of tube impingement on the surrounding tissues and re-direction of the tube during intubation were counted. Statistical analysis was used by unpaired t-test and chi-square test. $P < 0.05$ was considered to be statistically significant. Data were expressed as mean \pm SD.

Results: There was no failure case of intubation in both groups. The use of the PT significantly reduced the TTI (24.9 ± 8.0 vs 40.9 ± 23.0 sec (ST) $p < 0.05$). With Parker tube, a 100% success rate of intubation on the first attempt was obtained and no tube impingement on the surrounding tissues was observed. With standard tube, success rate of intubation on the first attempt was 90 % and the incidence of tube impingement was 25% ($p < 0.05$). All impinged cases were followed by successful intubation using re-direction of tube or several manipulations.

Conclusions: Our data showed the superiority of PT for AWS-assisted intubation with faster and easier advance. The PT is suitable for the AWS assisted gentle intubation like "ski".

From Proceedings of the 2009 Annual Meeting of the American Society Anesthesiologists.