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A comparison of the Truview EVO2™ optical laryngoscope blade with the Macintosh blade in adult patients

Background and Goal: Difficult intubation may lead to grave morbidity and mortality⁽¹⁾. Several airway devices are used to assist intubation when the vocal cords are not visualized by direct laryngoscopy⁽²⁾. Truview EVO2™ laryngoscope blade facilitates indirect view of the vocal cords by optical lenses and prisms. We prospectively compared intubating parameters of Truview EVO™ blade with Macintosh blade in adult patients with normal and anticipated difficult airway.

Materials and Methods: One hundred and seventy patients who were scheduled to have general anesthesia were randomly allocated into two: Group 1 patients were intubated with Truview EVO™ blade and group 2 patients were intubated with Macintosh blade. The following parameters were recorded: pre-operative airway evaluation, laryngoscopic view, duration of intubation, maximal force applied during intubation, anesthesiologist's estimation of intubation effort on 1 to 3 scale, and post-operative teeth and soft tissue damage, stridor and hoarseness.



Measuring maximal force applied

Results and Discussion: Truview EVO™ blade enabled better laryngoscopic view than Macintosh blade ($p=0.002$). Mean duration of intubation using Truview EVO™ blade was longer (33 ± 12 sec) compared with Macintosh blade (24 ± 13 , $p=0.0001$). Maximal force applied during intubation was lower using Truview EVO™ blade (7.2 ± 2.9 kg) compared with Macintosh blade (13.5 ± 4.5 , $p=0.002$). No significant difference was found in the anesthesiologist's estimation of intubation effort, teeth damage, stridor and hoarseness. Significantly fewer patients suffered soft tissue damage following intubation with Truview EVO™ blade than with Macintosh blade ($p=0.0004$).

Conclusion: Truview EVO™ laryngoscope blade may be beneficial in difficult intubation when direct laryngoscopy with Macintosh blade does not allow viewing of the vocal cords.

References:

1. Peterson GN, Domino KB, Caplan RA et al. *Anesthesiology* 2005;103:33-9.
2. Henderson JJ, Popat MT, Latto IP et al. *Anaesthesia* 2004;59:675-94.

