

[Saudi J Anaesth](#). 2011 Oct;5(4):376-81.

Use of Airtraq, C-Mac, and Glidescope laryngoscope is better than Macintosh in novice medical students' hands: A manikin study.

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Abstract

BACKGROUND AND AIM:

Obtaining patent airway is a crucial task for many physicians. When opportunities to practice intubations on patients are really limited, skill gaining methods are needed. We conducted a study among novice 6(th) year medical students to assess their ability to intubate the trachea in normal airway in manikin using four airway tools.

SETTING AND DESIGN:

Prospective, cohort study conducted at simulation center of university-based, tertiary care hospital.

METHODS:

FIFTY MEDICAL STUDENTS PERFORMED EITHER ORAL OR NASAL TRACHEAL INTUBATION USING THE FOLLOWING FOUR INTUBATING TOOLS: C-Mac videolaryngoscope, Glidescope, and Airtraq in comparison with regular Macintosh laryngoscope. Intubation time, visualization of glottic opening, ease of intubation, satisfaction of participants, incidence of dental trauma, and the need for optimization manoeuvres' use among different airway tools were recorded.

RESULTS:

In oral intubation, Airtraq was better than others in regard to intubation time, glottic opening, ease of intubation, and the need for external laryngeal pressure application, followed by Glidescope, C-Mac, and finally Macintosh laryngoscope ($P < 0.001$). Airtraq and Glidescope associated with less dental trauma than C-Mac and Macintosh. In nasal route, fastest intubation time was reported with Airtraq followed by Glidescope, C-Mac, and lastly Macintosh. Airtraq, Glidescope, and C-Mac were similar to each other and better than the Macintosh in regard to ease of intubation, satisfaction, and number of attempts ($P \leq 0.008$).

CONCLUSIONS:

New devices like Airtraq, Glidescope, and C-Mac are better than the regular Macintosh when used by novice medical students for oral and nasal intubation on manikin