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Is the Airtraq optical laryngoscope effective in tracheal intubation by novice personnel?

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Background: Macintosh laryngoscopic intubation is a lifesaving procedure, but a difficult skill to learn. The Airtraq optical laryngoscope (AOL) is a novel intubation device with advantages over the direct laryngoscope for untrained personnel in a manikin study. We compared the effectiveness of AOL with Macintosh laryngoscope for tracheal intubation by novice personnel.

Methods: The authors selected 37 medical students with no prior tracheal intubation experience and educated them on using both laryngoscopes. Seventy-four patients were randomly divided into two groups (group A: AOL, group M: Macintosh laryngoscope). They recorded the tracheal intubation success rate, intubation time, number of attempts, intubation difficulty scale, and adverse effects.

Results: The total success rate was similar in the two groups, but **the success rate at first attempt was higher in group A (P < 0.01). Group A also showed reduced duration and attempts at intubation, as well as adverse effects such as oral cavity injury.** Additionally, participant reports indicated that using the AOL was easier than the Macintosh laryngoscope (P < 0.01).

Conclusions: The AOL is a more effective instrument for tracheal intubation than Macintosh laryngoscope when used by novice personnel.