

MS#22

Forces applied by the laryngoscope blade onto the tongue during intubation attempts: a comparison between Mackintosh, AirTraq and Pentax AWS in a mannequin study

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The objective of this study was to measure the pressure created by different intubation devices on the tongue during endotracheal intubation attempts in the mannequin model.

Fourteen specialists and 20 anaesthesiologists in training took part in the study. I connected the manometer with the line used for inflating the mannequin tongue to create simulated conditions of tongue oedema. For the study, the mannequin tongue was not inflated. I compared the standard Mackintosh laryngoscope with AirTraq and Pentax AWS laryngoscopes. After a standard 20 min training with the three devices, every participant had one attempt at intubation with no time limit.

The pressure created on the tongue using the standard Mackintosh blade laryngoscope was the highest and may lead to traumatic complications. **Airtraq caused much less pressure on the tongue and therefore should lead to significantly fewer traumatic complications compared with the standard Mackintosh laryngoscope.**