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Endotracheal intubation with Airtraq versus Storz videolaryngoscope in children younger than two years - a randomized pilot-study

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The aim of the study was to compare the Storz videolaryngoscope to the Airtraq Optical laryngoscope for tracheal intubation in children younger than two years of age who had a normal airway assessment. Our hypothesis was that the Storz would have a better success rate than Airtraq.

Ten children aged 2 years or younger scheduled for elective cleft lip/palate surgery were included. The anesthesia was standardized and a Cormack-Lehane (CL)-score was obtained using a Macintosh laryngoscope. After randomization CL-score and endotracheal tube positioning in front of the glottis was performed with one device, followed by the same procedure and intubation with the other device. The video-feed was recorded along with real-time audio. The primary endpoint was the success rate, defined as intubation in first attempt. Secondary endpoints were the time from start of laryngoscopy to CL-score, tube positioning in front of the glottis, and intubation.

No difference in the success rate of endotracheal intubation could be established in this ten patient sample of children younger than two years with a normal airway assessment scheduled for elective cleft lip/palate surgery. **However, the Airtraq showed a number of time related advantages over the Storz videolaryngoscope.**