

Comparison of McGrath video laryngoscope with conventional Macintosh laryngoscope for tracheal intubation in pediatric patients with normal airway

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Abstract

Video laryngoscopes have attained prime importance in securing the airway in children in this present era. The magnified view, maintenance of an effective distance from the patients and high success rate make them a good choice for intubation. McGrath video laryngoscope is available with various sizes of single-use non-channeled disposable blades made of fog-free medical-grade optical polymer. However, there is a paucity of data regarding its use in children. In this prospective randomized controlled trial, a total of 88 ASA grade I and II children aged 2-10 years, weighing 10–20 kg undergoing general anaesthesia were enrolled. The primary aim was to compare intubation time using McGrath video laryngoscope and Macintosh laryngoscope. Our secondary outcomes included glottic exposure time, Cormack and Lehane grading, attempts of device/tube insertion, intubation difficulty scale and complications. The sample size was calculated using “intubation time” as the parameter from the previous study at a 95% confidence interval and 80% power. Using the sealed envelope technique, all children were randomly allocated to Group G, in whom McGrath video laryngoscope and Group M in whom Macintosh laryngoscope was used for intubation. The mean intubation time was comparable in both the groups (18.14 ± 17.80 (Group G) vs 17.30 ± 16.74 (Group M), $p=0.821$). The mean glottic exposure time was shorter in Group G than in Group M (5.66 ± 4.58 vs 8.50 ± 5.59 , $p=0.01$). The Cormack and Lehane grading was similar in both groups. Less intubation trauma was observed in Group G. This made us conclude that McGrath video laryngoscope is as useful as the Macintosh laryngoscope for intubation in children, that too, with lesser incidences of trauma.

Biography

Dr. Stuti Bhamri has completed her MBBS from JNMC, KLE University, Belgaum, Karnataka, India and is currently pursuing her Masters degree in Anesthesiology from SSG Hospital and Medical College Vadodara.

Speaker Publications:

1. Reducing computational time in ray tracing
2. Role of MRI in evaluation of hip pathologies
3. Evaluating long-term variability in precipitation and temperature in eastern plateau region, India, and its impact on urban environment

[5th International Anesthesia and Pain Medicine Conference](#) - Dubai, UAE- August 10-11, 2020.

Abstract Citation:

Stuti Bhamri, Comparison of McGrath video laryngoscope with conventional Macintosh laryngoscope for tracheal intubation in pediatric patients with normal airway, Anesthesia Meet 2020, 5th International Conference on Anesthesia and Pain Medicine Conference; Dubai, UAE- August 10-11, 2020. (<https://anesthesiology.conferenceseries.com/2020>)

