

# DONT' T WORRY, THERE'S VIDEOLARYNGO!

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## Background

Unpredictably difficult laryngoscopy is still a challenge and it could lead to serious complication. Commonly used clinical tests do not accurately predict the risk.

An ultrasound-based airway assessment has been proposed: the Median Distance from Skin to Epiglottis (mDSE) cut-off value that predicts difficult intubation is  $\geq 2.54$  cm. The aim of this study is to evaluate if the routine use of the videolaryngoscope could overcome the negative predictive factors of difficult intubation, particularly for mDSE  $\geq 2.54$  cm.

## Materials and methods

A group of 176 patients, aged 17 to 80 years, undergoing elective surgeries in E. Profili Hospital in Fabriano, has been recruited. Preoperative, for each patient the DSE have been evaluated. All patients have been intubated using videolaryngoscope and visual findings have been graded according to the Fremantle Videolaryngoscope Scoring System.

## Results

-The distribution of DSE values followed a Gaussian curve, with the most frequent one found between 2.1-2.4 cm.

-Regardless of DSE $>2.5$ , a complete vision has been reported in 72,7% and partial in 25,97% of cases undergoing videolaryngoscopic view;

-Regardless of DSE $>2.5$ , videolaryngoscopic view has allowed tracheal intubation in every case and in 93,5% as a first attempt.

-Blade -3D, best-performing in case of a high-risk intubation, has been used in 9.1% and a tracheal intubation has been performed at first attempt, one case as a second attempt.

<b>TOTAL PATIENTS</b>	<b>176</b>
<b>PATIENTS DSE<math>&gt;2.5</math></b>	<b>78; 44.3%</b>
<b>TOTAL VIEW DSE<math>&gt;2.5</math></b>	<b>56; 72.7%</b>
<b>PARTIAL VIEW DSE<math>&gt;2.5</math></b>	<b>20; 25.97%</b>
<b>FIRST ATTEMPT INTUBATION DSE<math>&gt;2.5</math></b>	<b>72; 93.5%</b>

Tab.1 Overall view of the results

## Conclusion

The use of the videolaryngoscope allows intubation at the first attempt and mostly with a complete view of the vocal cords, regardless of DSE. The routine introduction of the videolaryngoscope could reduce the risk of failed intubation.

Further clinical studies are needed to define the role of the routine use of videolaryngoscopy in terms of reducing the risk related to the manoeuvre and efficiency and effectiveness compared with the DSE score.

1. Falcetta S, Cavallo S, Gabbanelli V, Pelaia P, Sorbello M, Zdravkovic I, et al. Evaluation of two neck ultrasound measurements as predictors of difficult direct laryngoscopy. Eur J Anaesthesiol. 2018 Aug 1;35(8):605-12.

2. Carsetti A, Sorbello M, Adrario E, Donati A, Falcetta S. Airway Ultrasound as Predictor of Difficult Direct Laryngoscopy: A Systematic Review and Meta-analysis. Vol. 134, Anesthesia and Analgesia. Lippincott Williams and Wilkins; 2022. p. 740-50.