ELECTRONIC SUPPLEMENTARY MATERIAL

Song SE *et al.*: First-pass success rate and predictive factors for stylet use in videolaryngoscopic intubations with a Macintosh blade: a prospective observational study

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eTable 1 Multivariable logistic regression analysis of predictive factors for first-pass success in videolaryngoscopic intubation without a stylet, incorporating ultrasonographic airway evaluation parameters

Variables	Odds ratio (95% CI)	*P* value
First-pass success		
Extended model*		
Skin-to-epiglottis distance	0.80 (0.68 to 0.94)	0.007
Sternomental distance	1.30 (1.05 to 1.59)	0.015
Thyromental height	1.14 (1.08 to 1.21)	< 0.001
Severely limited cervical spine mobility	0.10 (0.03 to 0.33)	< 0.001

Multivariable logistic regression analysis used the Akaike information criteria-based stepwise selection method.

*The extended model incorporates five ultrasonographic airway evaluation parameters (tongue thickness, hyomental distance, skin-to-hyoid bone distance, skin-to-epiglottis distance, and skin-to-anterior commissure distance) to the 14 variables of the original model (age, sex, American Society of Anesthesiologists Physical Status classification, body mass index, modified Mallampati grade, upper lip bite test, thyromental and sternomental distance, thyromental height, inter-incision distance, neck circumference, cervical spine mobility, dental stature, and experience of practitioners)

CI = confidence interval

eTable 2 Performance metrics of the predictive models for patients who require a stylet during videolaryngoscopic intubation

Models	AUC (95% CI)	Sensitivity (%) (95% CI)	Specificity (%) (95% CI)	PPV	NPV	LR+	LR–
First-pass success							
Fixed sensitivity*							
Original model	0.83 (0.78 to 0.88)	80.5 (73.9 to 86.0)	70.5 (54.8 to 83.2)	91.7	47.0	2.72	0.28
Extended model	0.84 (0.79 to 0.89)	80.5 (73.9 to 86.0)	75.0 (59.7 to 86.8)	92.9	48.5	3.22	0.26
Maximizing Youden index							
Original model	0.83 (0.78 to 0.88)	77.7 (70.8 to 83.5)	77.3 (62.2 to 88.5)	93.3	45.9	3.42	0.29
Extended model	0.84 (0.79 to 0.89)	82.1 (75.7 to 87.4)	75.0 (59.7 to 86.8)	93.0	50.8	3.28	0.24
Success on the second attempt (with laryngeal manipulation)							
Fixed sensitivity							
Original or extended model	0.90 (0.85 to 0.94)	81.8 (75.9 to 86.7)	77.8 (40.0 to 97.2)	98.9	15.2	3.68	0.23
Maximizing Youden index							
Original or extended model	0.90 (0.85 to 0.94)	90.2 (85.4 to 93.8)	77.8 (40.0 to 97.2)	99.0	25.0	4.06	0.13

*Fixed sensitivity indicates that cut-off values are determined by selecting maximum specificity while maintaining a sensitivity of ≥ 80%.

AUC = the area under the curve; CI = confidence interval; PPV = positive predictive value; NPV = negative predictive value; LR+ = positive likelihood ratio; LR– = negative likelihood ratio