Which nostril should be used for nasotracheal intubation with Airtraq NT®: the right or left? A randomized clinical trial

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Purpose: Nasotracheal Airtraq, is specifically designed to improve the glottis view and ease the nasotracheal intubation process in normal and difficult cases. ,

Methods: After Ethics committee approval, we decided to enroll 40 patients with an ASA physical status of I or II, between 18-70 years of age undergoing elective maxillofacial, oral and double chin surgery to determine which nostril is more suitable for nasotracheal intubation with nasotracheal Airtraq. Patients were randomised into the right and left nostril groups. After standard anesthesia induction with propofol and fentanyl, rocuronium was used for muscle relaxation. Our primarily aim was to compare the glottis visualization time, intubation time and total intubation times. Demographic and airway management variables, Cormack-Lehane grades, the need for optimization, tube adjustment maneuvers (90° anti-clockwise rotation, external laryngeal pressure, cuff inflation, head flexion, operator change and the use of Magill forceps in strict order), hemodynamic data, occurrence of epistaxis during the process were also recorded.

Results: All intubations were performed by experienced user of the Airtraq® and the Airtraq NT® Demographic and airway characteristics were similar among the groups.

Table 3. Nasotracheal intubation variables of patients, values were given as numbers (n), as mean (SD), or as IQR [25-75 percentiles].

	Right nostril (n=18)	Left nostril (n=17)	p	
Insertion time (s)	5.8 (1.9)	6.5 (1.8)	0.293	0.293
Nasotraheal intubation time (s)	16.7 (5.7)	33.1 (15.4)	<0.001*	<0.001
Total nasotracheal intubation time (s)	30 [28-31.3]	50 [33.5-62]	<0.001*	
90° anticlockwise rotation Present / absent (n)	13 / 5 72% / 28%	15 / 2 88% / 12%	0.402	
OELM Present /absent	0 / 18	9 / 8	0.001&	
Head flexion Present / absent	0 / 18	4 / 13	0.05	
Tube cuff inflation Present / absent	1 / 17	5 / 12	0.09	

Conclusion: Nasotracheal intubation via the right nostril can be safely and quickly performed with the Airtraq NT® without the need of Magill forceps. We recommend the use of the 90° anti-clockwise rotation maneuver and external laryngeal pressure to direct the tube into the vocal cords first. On the other hand; cuff inflation, head flexion maneuvers also must be kept in mind.