HAVE REINTUBATION IN INTENSIVE CARE UNIT MORE TECHNICAL DIFFICULTY AND COMPLICATIONS IN COMPARISON WITH FIRST INTUBATION? A PROSPECTIVE, OBSERVATIONAL STUDY

Adrián Martínez, Manuel Taboada, Aurora Baluja, Mónica Lombardía, Pablo Otero, Julián Álvarez
Complejo Hospitalario Universitario de Santiago de Compostela. Dept of Anesthesiology and Intensive Care. Spain

BACKGROUND

Endotracheal intubation is a common intervention in Intensive Care Unit (ICU) associated with a high incidence of difficult intubation and complications. We hypothesized that **reintubations in ICU** would be associated with **more technical difficulty** and **complications** compared with first intubation.

METHODS

We **prospectively** evaluated during **34 months** all patients that were intubated using a direct laryngoscopy and posteriorly reintubated in the ICU. The purpose of this study was to compare first time success rate, technical difficulty of intubation and the incidence of complications during intubation.

	First intubation (n=48)	Reintubation (n=48)	P value
Intubation attempts			
1	44 (91,7)	42 (87,5)	ns
2	4 (8,3)	5 (10,4)	ns
≥3		1 (2)	ns
Adjunct to DL used (gum-elastic bougie)	3 (6,25)	9 (18,7)	< 0,05
Modified Cormack-Lehane grade glottic view			< 0,05
1 Full view of the glottis	24 (50)	20 (41,6)	
2a Partial view of the glottis	12 (25)	5 (10,4)	
2b Arytenoid or posterior part of the vocal cords only just visible	12 (25)	16 (33)	
3 Only epiglottis visible		7 (14,6)	
4 Neither glottis nor epiglottis visible			
Procedural complications	12 (25)	20 (41,6)	< 0,05
Hypotension < 80 mmHg	11 (22,9)	16 (33)	
Hypotension < 65 mmHg	5 (10,4)	10 (20,8)	
Hypoxia < 90%	5 (10,4)	10 (20,8)	
Hypoxia < 80%	2 (4,1)	7 (14,6)	
Esophageal intubation		1(2)	

RESULTS AND DISCUSSION

A total of **340 patients** were intubated in ICU, of which 48 (14%) were reintubated posteriorly. **No difference in the number of attempts** of intubation were observed between the first intubation and the reintubation. Reintubation was associated with worse glottic visualization, with more use of gum-elastic bougie, and more complications compared with first intubation. Elmer et al. in a similar study observed more complications during reintubation compared to first intubation in their study.

CONCLUSIONS

Compared with first intubation in ICU, **reintubation** using a direct laryngoscopy was associated with **worse glottic views, an increase of the technical difficulty of intubation and the incidence of complications**. Further studies are required to confirm these findings.

REFERENCES

Elmer et al. Reintubation in critically ill patients: procedural complications and implications for care. Critical Care 2015; 19.112-18.