Category :**Respiratory: mechanical ventilation**

A119 - ***Evaluating and comparing tracheostomy practice during the first wave of the covid-19 pandemic with pre pandemic practice, in the south east of scotland***

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Introduction:

Performing a tracheostomy during the Covid-19 pandemic raised a number of concerns, and guidance was limited and conflicting from the onset [1]. This study aims to investigate whether significant change in our tracheostomy practice occurred during the first wave of the Covid-19 pandemic.

Methods:

We undertook a service evaluation from March - May 2020, assessing tracheostomy practice during the Covid-19 pandemic within five adult intensive care units (ICUs) across the South East of Scotland. We included patients with confirmed Covid-19 infection, receiving mechanical ventilatory support that required tracheostomy insertion. We compared this to a cohort treated within one of the ICUs prior to the pandemic, from 2015-19. Patients were included if treated for ARDS secondary to bacterial, viral or aspiration pneumonitis, requiring mechanical ventilation and tracheostomy insertion.

Results:

Tracheostomy insertion was performed in 25 (28.1%) of 89 mechanically ventilated Covid-19 positive patients. Within the pre Covid-19 cohort 19 patients, who met the inclusion criteria, required a tracheostomy insertion. Results of the comparison data for both cohorts is shown in Figure 1.

Conclusion:

Overall, despite the limited and conflicting guidance, we were reassured that our practice had not deviated from standard care due to fears around aerosolisation and risk of staff transmission. The results show a decreased age and a higher positive end-expiratory pressure (PEEP) at the time of tracheostomy in the Covid-19 cohort, suggesting that tracheostomies can be safely performed at PEEP values higher than 5.

References:

1. Queen Elizabeth Hospital Birmingham COVID-19 airway team. Safety and 30-day outcomes of tracheostomy for COVID-19: a prospective observational cohort study. *British Journal of Anaesthesia* 2020; **125**: 872-79

Image :

Baseline Characteristics	Covid-19 Cohort (n=25)	Pre Covid-19 Cohort (n=19)	p-value
Male	17 (68%)	12 (63.2%)	0.79^
Age	58 [49.5, 64]	68 [59.0, 70.0]	<0.01α
Time to tracheostomy (days)	16 [11.0, 21.5]	14 [10.5, 16.0]	0.34 α
At Tracheostomy			
PEEP (cmH_20)	8 [5.0, 9.8]	5 [5.0, 6.5]	<0.01 α
FiO_2	0.4 [0.32, 0.45]	0.35 [0.3-0.4]	0.09 α
PaO_2 (kPa)	9.7 [8.7, 11.9]	9.16 [8.9, 9.9]	0.40 α
PaO_2/FiO_2 Ratio (kPa)	28.8 [20.9, 31.9]	28.8 [22.6, 33.4]	0.50 α
Post Tracheostomy			
Survived	22 (88%)	16 (84%)	1.00^
Time to decannulation (days)β	14.0 [10.0, 17.3]	20 [12.0 31.5]	0.10 α

Legend Figure 1: Tracheostomy practice in a Covid-19 cohort in comparison to a pre Covid-19 cohort. All values are median [IQR] unless otherwise stated. Fishers exact(^), Mann-Whitney(α), Survivors only(β)