

AL Shehatta¹ ; D Mutkule¹ ; M Imran¹ ; H Elmelliti² ; N Shallik³ ; AA Hssain¹

¹Hamad General Hospital , MICU, Doha, Qatar, ²Hamad General Hospital , Emergency Department , Doha, Qatar, ³Hamad General Hospital , Anaesthesia , Doha, Qatar

Introduction:

To describe the demographics, clinical characteristics, severity of illness and outcome of confirmed severe COVID-19 infection requiring tracheostomy whilst on venovenous ECMO support. Percutaneous dilatational tracheostomy (PDT) is performed to aid sedation and mechanical ventilation management and to allow mobilisation and rehabilitation. There is no specific or agreed recommendations on the timing of PDT [1,2]. Outcome of ECMO-supported COVID-19 tracheostomized patients is not adequately reported

Methods:

A single centre retrospective review of electronic ICU data of adult patients with confirmed COVID-19 infection supported by VVECMO at Hamad General Hospital in Doha, Qatar from 01/03/2020 to 01/01/2021. The study is approved by institutional research board and individual consent was waived (MRC-01-21-037)

Results:

34 patients received ECMO for severe COVID-19. 17/34 (50%), all supported by VVECMO, underwent tracheostomy. The majority 16/17 were performed bedside by percutaneous technique and one (1/17) underwent surgical tracheostomy and is excluded from final analysis. Table 1 presents demographics and severity of illness. The prevalence of hypertension, diabetes, coronary artery disease was 19,19 and 13% respectively. None of the patients was known to have heart failure, stroke or chronic kidney disease. The 30- and 90-day survival was 69 and 50% respectively, which is similar to international findings [3]

Conclusion:

Adult patients with confirmed COVID-19 undergoing percutaneous tracheostomy on ECMO were younger and had fewer comorbidities. They had high severity of illness score on admission and only half of them survived to 90 days. A larger sample size is needed to reach firm conclusions

References:

1. Kruit N, et al. J Cardiothorac Vasc Anesth.32:1162-6,2018
2. Salna M, et al. ASAIO J.66:652-6,2020
3. <https://www.else.org/Registry/FullCOVID19RegistryDashboard.aspx>

Table:

	Median	25th centile	75th centile
Age(years)	48	42.8	57.8
BMI	25.7	24.2	26.8
Duration of intubation (days)	25	21	32
ECMO-to-tracheostomy (days)	21.5	17.8	26.3
APACHE2	26.5	21	30
SOFA on admission	12	11	12
SOFA on PDT day	9	6.75	10.5

demographics, duration of intubation, days on ECMO before tracheostomy and severity of illness scores of all patients (n=16)