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Daily Living Recovery in COVID-19 ARDS Patients with Prolonged VV-ECMO Support

공지사항

- 소속기관이나 저자명이 드러나지 않도록 해주세요.
- 제목 슬라이드 포함 최대 6장, Font size 20 이상
- PPT 파일 작성 후 PDF로 전환해서 접수(필수)

Purpose

- Veno-venous extracorporeal membrane oxygenation (VV-ECMO) serves as a critical rescue therapy for severe COVID-19-related Acute Respiratory Distress Syndrome (CARDS) patients who cannot be adequately managed with conventional mechanical ventilation. However, prolonged VV-ECMO support is associated with an increased risk of complications such as intensive care unit-acquired weakness (ICUAW). This study aims to compare and assess the daily living abilities of CARDS patients with prolonged ECMO support versus those with non-prolonged ECMO support.

Methods

- This retrospective study included 53 COVID-19 patients who received VV-ECMO from March 1, 2020, to September 30, 2023 in a single institute.
- Patients were divided into non-prolonged (less than 28 days) and prolonged (28 days or more) ECMO groups.
- Daily living abilities were assessed using the Korean Version of Modified Barthel Index (K-MBI) during outpatient visits post-discharge.
- Statistical analysis was performed using SPSS Ver. 18.0 with significance set at $p < 0.05$.

Results

- A total of 53 patients received VV ECMO support for COVID-19 ARDS during the study period. Of these, 39 patients were in the non-prolonged group (ECMO <28 days) with an average ECMO duration of 14.92 days, while the prolonged group (ECMO ≥28 days) had an average ECMO duration of 51.72 days.
- Mortality rates were 30.8% in the non-prolonged group and 42.9% in the prolonged group, with no statistical significance. The prolonged group exhibited longer ICU and hospital stays and higher rates of CMV infection and ventilator-associated pneumonia.
- At six months post-ECMO, K-MBI scores showed no statistically significant difference between the prolonged and non-prolonged groups.

Conclusion

- Prolonged ECMO support increases the risks of extended ICU stays, longer hospitalizations, and co-infections. However, effective management in such cases may enable weaning with native lung recovery, as the 6-month daily living recovery shows no significant difference compared to the non-prolonged group.
- Further research is needed to evaluate the timing of daily living recovery and its relationship with other factors in prolonged ECMO support.