S-C14

체외막순환기를 사용한 환자들의 임상양상: 3차 병원의 10년의 경험

분당서울대병원 내과[1], 서울대학교병원 내과[2]

이성우[2], 박재윤[1], 이하정[1], 안신영[2], 김세중[2], 진호준[2], 주권욱[1], 채동완[2], 나기영[2]

Clinical Course of Patients Receiving Extra Corporeal Membrane Oxygenation (ECMO): 10 Year-experience of a Single Tertiary Center

Sung Woo Lee[2], Jae Yoon Park[1], Ha Jeong Lee[1], Shin Young Ahn[2], Sejoong Kim[2]
Ho Jun Chin[2], Kwon Wook Joo[1], Dong-Wan Chae[2], Ki Young Na[2]

Department of Internal Medicine[1], Seoul National University Bundang Hospital, Gyeonggi-do, Korea
Department of Internal Medicine[2], Seoul National University College of Medicine, Seoul, Korea

Background: There has been a paucity of literatures on the clinical course of patients receiving Extra Corporeal Membrane Oxygenation (ECMO) in Korea.
Methods: Medical records were reviewed from July 2003 to September 2014 in Seoul national university Bundang hospital. Among 295 patients who had code for ECMO, 171 were included for the analysis: the excluded were age <20 years (n=8), death within 24hours (n=30), non-ECMO receiver (n=14), on renal replacement therapy (RRT, n=6) and on the course of continuous RRT (n=66). Clinical parameter, chronic diseases and laboratory results at the time of ECMO insertion were collected. The stage of Acute kidney injury (AKI) was defined following KDIGO guideline.
Results: Mean age was 62.7±14.3 years and 108 (63.2%) were male. 102 (59.6%) and 42 (24.6%) received ECMO because of cardiac and pulmonary problem, respectively. The mean simplified acute physiology score 2 (SAPS2) was 57.9±13.0. The proportion of venoarterial and venovenous ECMO were 75.4% (129/171) and 24.6% (42/171), respectively. The in-hospital mortality was 57.3% (98/171) with median (interquartile range) survival of 17 days (7-41). The cumulative incidences of acute kidney injury (AKI) stage 1-3 were 70.2% (120/171), 50.9% (87/171) and 43.9 % (75/171), respectively. The mean renal survival were 3.7±7.7 days, 5.5±10.0 days and 5.3±9.9 days in AKI stage 1-3, respectively. We performed multivariate cox proportional hazard model to identify risk factors. SAPS2 was the only risk factor for the in-hospital mortality. Although no associated factor for AKI stage 1 was identified, hyperbilirubinemia, SAPS2, neutrophil count and ECMO mode were significant risk factors for AKI stage 2-3.
Conclusion: Patients receiving ECMO showed high incidence of in-hospital mortality and AKI. SAPS2 was independent risk factor for the in-hospital mortality and AKI stage 2-3. Hyperbilirubinemia, neutrophil count and ECMO mode were associated with the future AKI stage 2-3. Prospective study needs to be followed to confirm our results.

Key Words: 체외막산호화장치, 사망률, 급성신손상
Extracorporeal membrane oxygenation, Mortality, AKI