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## **Impact of Covid-19 pandemic in the critically ill patients without Covid-19 infection**

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**Objectives:** During the Covid-19 pandemic, national health care system and medical resources were re-organized to support the Covid-19 infected patients. For the critically ill patients, hospital accessibility and medical resource utilization should not be limited at any occasion. This study is aimed to test if the critical care system has been maintained to the critically ill patients without COVID-19 infection during the pandemic.

**Methods:** We retrospectively reviewed patients' medical records who received CRRT in our hospital from Jan 2016 to Mar. 2021. We excluded ESKD patients on maintenance dialysis prior to admission. Patients were stratified by the medical and surgical patients. Annual numbers of patient included, disease severity at admission, process of care during the hospital stay, and in-hospital mortality rate were compared before (Jan. 2016 to Dec.2019) and during (Jan, 2021 to Mar. 2021) the pandemic. Effect of pandemic on hospital mortality was analyzed using the uni-and multi-variable cox-proportional hazard model.

**Results:** Mean numbers of critically ill patients received CRRT per year significantly decreased during the pandemic in both of the medical (2016-2016:  $181.3 \pm 22.2$ , 2020: 134,  $p < 0.001$ ) and surgical (2016-2016:  $76.5 \pm 2.7$ , 2020: 56,  $p < 0.001$ ) department. Age, sex, and the severity of disease at admission was not changed whereas the proportion of patients with diabetes (before, 44.4%, after 56.5,  $p < 0.005$ ) and cancer (before, 19.4%, after, 32.3%,  $p < 0.001$ ) increased during the pandemic in medical patients. Time from hospital arrival to ICU admission, and the time from hospital arrival to intervention/operation were not changed. During the pandemic, 59.6% of the patients received intervention/ operation within 6 hours of hospital arrival, in surgical patients. In the multivariable analyses, pandemic had no effect on in-hospital mortality in critically ill patients received CRRT.

### **Conclusions:**

In the critically ill patients without COVID-19 infection, overall critical care system had been successfully maintained during the COVID-19 pandemic.