Emergency Brain Surgery

One of the challenges neurosurgeons are facing in the global public health crisis caused by the COVID-19 pandemic is to balance COVID-19 screening with timely surgery. Lee et al. described a clinical pathway for patients who needed emergency brain surgery and determined whether differences in the surgery preparation process caused by COVID-19 screening affected clinical outcomes.

During the COVID-19 period, patients in need of emergency brain surgery were managed using a novel standardized pathway designed for COVID-19 screening. They conducted a retrospective review of patients who were hospitalized through the emergency room and underwent emergency brain surgery. A total of 32 patients who underwent emergency brain surgery from February 1 to June 30, 2020 were included in the COVID-19 group, and 65 patients who underwent surgery from February 1 to June 30, 2019 were included in the pre-COVID-19 group. The baseline characteristics, disease severity indicators, time intervals of emergency processes, and clinical outcomes of the two groups were compared. Subgroup analysis was performed between the immediate surgery group and the semi-elective surgery group during the COVID-19 period.

There were no significant differences in baseline characteristics and severity indicators between the pre-COVID-19 group and COVID-19 group. The time interval to skin incision was significantly increased in the COVID-19 group (P = 0.027). However, there were no significant differences in the clinical outcomes between the two groups. In subgroup comparison, the time interval to skin incision was shorter in the immediate surgery group during the COVID-19 period compared with the pre-COVID-19 group (P = 0.040). The screening process did not significantly increase the time interval to classification and admission for immediate surgery. The time interval to surgery initiation was longer in the COVID-19 period due to the increased time interval in the semi-elective surgery group (P < 0.001).

They proposed a clinical pathway for the preoperative screening of COVID-19 in patients requiring emergency brain surgery. No significant differences were observed in the clinical outcomes before and after the COVID-19 pandemic. The protocol they described showed acceptable results during this pandemic [1].

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Lee SH, Jang JS, Chung JW, Kwon JT, Park YS. Clinical Pathway for Emergency Brain Surgery during COVID-19 Pandemic and Its Impact on Clinical Outcomes. J Korean Med Sci. 2021 Jan 11;36(2):e16. doi: 10.3346/jkms.2021.36.e16. PMID: 33429475.