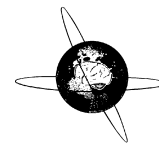




Since January 2020 Elsevier has created a COVID-19 resource centre with free information in English and Mandarin on the novel coronavirus COVID-19. The COVID-19 resource centre is hosted on Elsevier Connect, the company's public news and information website.

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Letter to the Editor

EEG during the COVID-19 pandemic: What remains the same and what is different



COVID-19 (coronavirus disease 2019) is the infectious respiratory disease caused by SARS-COV 2 virus (Severe Acute Respiratory Syndrome coronavirus 2). On March 11th, 2020 the World Health Organization (WHO) declared COVID-19 a pandemic considering the over 118,000 cases of the coronavirus illness in over 110 countries and territories around the world and the sustained risk of further global spread (Cuciotta and Vanelli, 2020). In the space of a few weeks the COVID-19 pandemic changed the way medicine is practiced in the United States and around the world. In order to control the spread of COVID-19, the Centers for Disease Control and Prevention (CDC) and department of health (DOH) of various states recommended isolation of sick persons, quarantine for those who may have been exposed to the virus and social distancing (CDC, 2020). Social distancing also referred to as physical distancing meant keeping space between people outside of their homes. A distance of at least 6 feet (2 meters) was recommended and people were asked not to gather in large groups, avoid crowded places and mass gatherings. All non-essential staff were advised to stay home and work remotely if the facility to do so was available to them. Hospitals across the country were forced to make some drastic changes in order to prepare for the expected surge of COVID-19 patients. In New York City, hospitals canceled all elective surgeries, closed in-patient epilepsy and stroke units and canceled all outpatient clinics. Patients were discharged from the hospitals. Beds, especially ICU beds, and other resources such as ventilators were reserved for COVID-19 patients. Physicians working in these hospitals were advised to adopt telemedicine in order to primarily maintain continuity of care for their existing patients.

The COVID-19 pandemic led to a rapid reorganization of the epilepsy services in our department. All elective admissions to the epilepsy monitoring unit (EMU) were canceled. The use of long-term continuous EEG (cEEG) monitoring in neurological and medical intensive care units (ICUs) witnessed a dramatic decrease in volume. The floor and ICU beds were occupied by COVID-19 patients and the residents and attending physicians were instructed to use a portable 25 minutes emergency EEG as a substitute for cEEG study if indicated. The rationale for doing so was to reduce the risk of exposure to coronavirus to the neurophysiology technician since cEEG study is more labor intensive and the technician has to enter the patient room at least 4 times over 24 hours to check on the integrity of the study and to upload the EEG clip to the EEG server to be read by the electrophysiologist on call. The goal was also to follow WHO's recommendations for the rational use of personal protective equipment (PPE) by restricting entry into the rooms of COVID-19 patients unless absolutely necessary (World Health Organization, 2020). The technician received instruction on the correct sequence of donning and

doffing PPE and after putting on a regular surgical mask (not N-95 respirator), face shield and gown prepped the patient in the usual manner. Either reusable or disposable electrodes were placed according to the international 10–20 system and the technician stayed in the patient's room throughout the duration of the 25-minute study. Once the technician returned to the EEG lab, the machine was cleaned with a commercially available germicidal disposable wipe (Sani-Cloth) which is bactericidal, tuberculocidal and virucidal in 2 minutes prior to next use. By enacting the above changes, we have at the time of writing conducted 20 EEG studies on admitted patients with COVID-19. The most common clinical indication for EEG requisition was altered mental status with EEG showing diffuse theta and delta slowing. Our EEG laboratory has remained open throughout the COVID-19 pandemic and none of our EEG technicians or electrophysiologists have got infected with COVID-19 by following the above clinical practice.

Author contributions

NKS conceived, drafted and revised the manuscript.

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Disclosures

NKS serves as Associate Editor, The Eastern Journal of Medicine and Editor-in-Chief, ARP Journal of Combat Sports Medicine.

Data sharing statement

The author has no additional data to share.

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Nitin K. Sethi*

Department of Neurology, New York-Presbyterian Hospital, Weill Cornell Medical Center, New York, NY, USA

* At: Dept. of Neurology, Comprehensive Epilepsy Center, New York-Presbyterian Hospital, Weill Cornell Medical Center, 525 East, 68th Street, New York, NY 10065, USA.
E-mail address: nis9030@med.cornell.edu

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