

Azd-1222

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Herpes simplex encephalitis: case report

A 27-year-old man developed herpes simplex encephalitis following vaccination with Azd-1222 against COVID-19.

The man with no prior history of herpes simplex virus (HSV) and COVID-19 infection received his first dose of Azd-1222 [Oxford–AstraZeneca; ChAdOx1 nCoV-19] vaccine [*route and dosage not stated*] 8 days ago. Three days after the administration of the Azd-1222 vaccine, he woke up and immediately started vomiting. Following the emesis period, symptoms of severe headache and altered mental status began to appear, including slowed psychomotor activity and loss of alertness; however, no signs of disorientation to time and location and people around him were evident at that time. He then presented to a local clinic for outpatient treatment and was prescribed baclofen and diclofenac. After returning home, he developed symptoms of severe headache, agitation, delirium, disorientation to time, location and people around him and experienced severe emetic episodes again. The next morning, following four days after vaccination, he presented to the emergency department of a local hospital. After obtaining blood tests, chest CT scan and brain CT scan, he was transferred to another hospital for further evaluations with the preliminary diagnosis of encephalitis. On admission, chest and brain CT scans showed normal findings with no evidence of involvement. Primary neurological evaluations revealed altered mental status to Glasgow Coma Scale (GCS) score of 12. Neurological examination revealed altered mental status and decreased level of consciousness and disorientation. Following these observations, he was intubated in order to preserve the airway, due to reduced levels of consciousness he was shifted to the ICU. Results obtained from complimentary evaluations revealed elevated temperature and leukocytosis. The remaining laboratory test values were all in normal ranges.

The man was immediately put on acyclovir due to suspicion of herpetic encephalitis based on his clinical presentations and medical history. Cerebrospinal fluid (CSF) analysis demonstrated decreased protein levels, a WBC count of 600 /mm³ with the predominance of lymphocyte and normal glucose levels, all of which were suggestive of a viral encephalitis. PCR test for CSF turned positive for HSV; therefore, the diagnosis of herpes simplex encephalitis was confirmed secondary to Azd-1222 vaccination. Moreover, brain MRI revealed no space-occupying lesions in supra and infratemporal structures. White and gray matter signals, cerebral ventricles, major intracranial vascular structures, basal ganglia and brainstem were all normal. Furthermore, EEG also depicted normal results. He was planned for 21 days therapy with acyclovir. His altered mental status gradually ameliorated over the course of the first eight days of admission. He was extubated after day 8 of admission. Although some degrees of amnesia and unusual behaviors were still present following the extubation. These symptoms improved over the next few days, and he was finally discharged on the day 21.