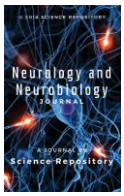

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Case Report

Diffuse Midline Glioma, H3K27M-mutant Subtype, Confused for Viral Encephalitis: A Case Report

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ABSTRACT

The diffuse midline glioma, H3K27M-mutant subtype, occurs mainly in children as a result of mutations in the histone H3 (H3F3A) and HIST1H3B (K27M) genes and is characterized by diffuse tumor growth in central nervous system (CNS) midline structures. Due to its nonspecific clinical manifestations, viral encephalitis is often confused with other central nervous system diseases. In this case, we reported a young male patient who was admitted to the hospital chiefly complaining of "diplopia for more than two months and aggravated walking instability for more than 10 days". After admission, relevant patient blood and cerebrospinal fluid (CSF) tests were completed, and no obvious abnormalities were found. Chest CT suggested pulmonary infection; magnetic resonance imaging (MRI) and contrast-enhanced CT, PET-CT and other imaging examinations of the head all indicated a high possibility of viral encephalitis. Symptoms of fever were improved in the patient after treatment with antiviral therapy and anti-infection therapy. However, symptoms of neurological function loss, such as double vision and adverse right limb movement, persisted. Finally, stereotactic biopsies of deep brain lesions were carried out and sent to the pathology department, which led to a diagnosis of diffuse midline glioma, H3K27M-mutant subtype (WHO IV). His family chose to perform conservative treatment in another hospital, and the patient died four months later. To conclude, when clinical symptoms of suspected viral encephalitis appear in the course of diffuse midline glioma, it can result in confusion regarding clinical diagnosis and treatment. Clinicians should ensure proper early recognition and identification of the disease.

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