MOST-LIKED RESEARCH PRESENTATION AWARDED BY THE PUBLIC

28. WHEN IMMUNODEFICIENCY MEETS NEUROSURGERY: BRAIN ABSCESS IN A WISKOTT-ALDRICH SYNDROME PATIENT

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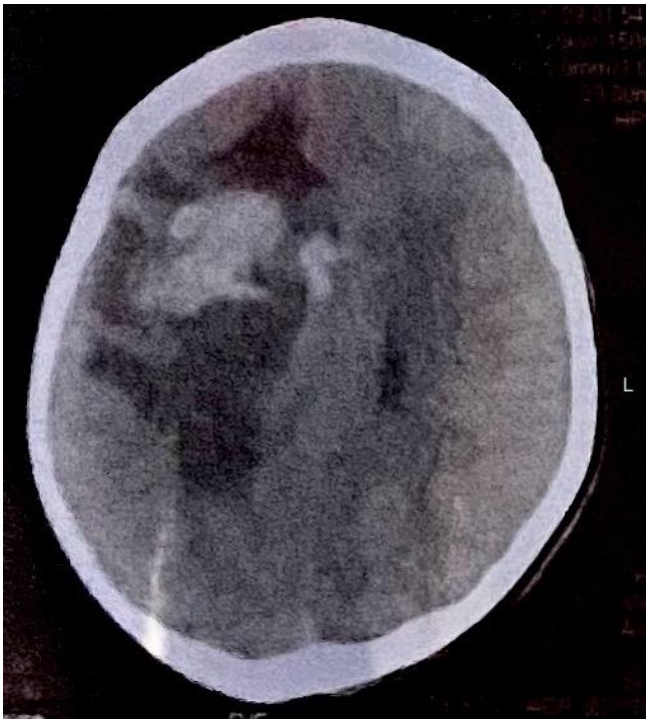
https://www.youtube.com/live/fSpXH-3Xy5w?t=8880s

CASE REPORT: A 4-year-old male with a known diagnosis of WAS,presented with a sudden onset of abnormal behavior and left-sided eye and upper limb twitching that lasted around 15 minutes. These movements were not associated with loss of consciousness, tonic-clonic activity, frothing, tongue biting, or incontinence. The mother reported no fever, and there were no obvious infective foci identified. Notably, the child had a recent history of generalized eczema that had been infected and treated at a local hospital, and he had experienced multiple past episodes of eczema infected with methicillin-resistant *Staphylococcus aureus* (MRSA). On examination, the patient was clinically well and afebrile, with no apparent neurological deficits. He was alert and active, with healed eczematous rashes noted over the body. Other systemic examinations were unremarkable. Given the abnormal behavior and history of thrombocytopenia, a non-contrast CT (NCCT) of the brain was performed to rule out trauma or intracranial hemorrhage. The NCCT revealed a focal lesion with ring enhancement in the right hemisphere, consistent with a brain abscess. Blood cultures returned positive for MRSA, although inflammatory markers were only mildly elevated (CRP: 25 mg/L, leukocytes: 13.71 x 10^9/L). The patient was promptly optimized for neurosurgery with platelet transfusion and intravenous immunoglobulin (IVIG). A neurosurgical team performed burr hole drainage of the brain abscess, and high-dose intravenous antibiotics, including cefotaxime, metronidazole, and vancomycin, were initiated. The pus culture confirmed the presence of MRSA. Despite clinical improvement, the patient experienced two episodes of focal neurological seizures, prompting the initiation of prophylactic anticonvulsant therapy to prevent further seizures. **CONCLUSION:** Brain abscesses are a rare but serious complication in patients with Wiskott-Aldrich Syndrome, highlighting the complexity of managing CNS infections in immunocompromised individuals. Early recognition and aggressive management, including prompt imaging, targeted microbiological analysis, and a multidisciplinary approach, are crucial for improving outcomes. This case underscores the necessity of maintaining a high index of suspicion for CNS infections in patients with WAS,especially when neurological symptoms are present. The successful management of this case demonstrates the importance of early intervention and tailored antibiotic therapy in achieving a favorable outcome, even in the context of severe underlying immunodeficiency.

Figure. Non-Contrast CT Scan Showing Ring-Enhancing Lesion in the Right Hemisphere Consistent with a Brain Abscess in a Wiskott-Aldrich Syndrome Patient.



Key Words: Wiskott-Aldrich Syndrome, Brain Abscess, Primary Immunodeficiency Diseases.