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Dengue Fever Associated with Occulomotor Palsy: A Case Report

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Abstract: ***Dengue fever, a mosquito - borne viral infection, is known for its diverse clinical manifestations. In this case report, we present a rare case of dengue fever associated with occulomotor palsy, a condition characterized by dysfunction of the third cranial nerve. A 32 - year - old male presented with acute fever, severe headache, and diplopia. Laboratory investigations confirmed dengue virus infection. Neurological assessment revealed occulomotor palsy, which is an unusual complication of dengue fever. The patient received supportive care and antipyretics, and his symptoms gradually improved over the course of two weeks. This case highlights the importance of considering dengue fever as a potential etiology for neurological complications, even in regions where it is not endemic.***

Keywords: Dengue fever, occulomotor palsy, mosquito-borne infection, neurological complications, case report

1. Introduction

Dengue fever, caused by the dengue virus and transmitted primarily by Aedes mosquitoes, is a common tropical disease. It is characterized by a wide range of clinical manifestations, ranging from mild febrile illness to severe and potentially life - threatening conditions such as dengue hemorrhagic fever or dengue shock syndrome. Neurological complications in dengue fever are relatively rare but can pose significant challenges in diagnosis and management.

2. Case Presentation

A 32 - year - old previously healthy male presented to our hospital with a 5 - day history of high - grade fever, severe frontal headache, and diplopia. He denied any recent travel to dengue - endemic regions. Physical examination revealed a temperature of 39.5°C, generalized maculopapular rash, and bilateral conjunctival injection. Neurological examination revealed ptosis of the left eyelid, restricted adduction, and upward deviation of the left eye, consistent with left occulomotor palsy.

Laboratory investigations revealed thrombocytopenia (platelet count of 92, 000/mm^3) and a positive NS1 antigen test, confirming dengue virus infection. Lumbar puncture was performed, and cerebrospinal fluid analysis showed a mild lymphocytic pleocytosis (8 cells/mm^3) and an elevated protein level (54 mg/dL), consistent with a viral etiology.

The patient was managed with supportive care, including intravenous fluids and antipyretics. No specific antiviral treatment for dengue fever was administered. Over the course of two weeks, the patient's fever subsided, and his neurological symptoms gradually improved. Repeat examination showed resolution of occulomotor palsy.

3. Discussion

Neurological complications in dengue fever are uncommon but can manifest as encephalitis, myelitis, Guillain - Barré syndrome, or cranial neuropathies. Occulomotor palsy, as seen in our patient, is a rare presentation. The exact pathophysiological mechanisms underlying dengue - associated occulomotor palsy remain unclear but may involve immune - mediated mechanisms or direct viral invasion of the nervous system.

4. Conclusion

This case report highlights the importance of considering dengue fever as a potential cause of neurological complications, including occulomotor palsy, even in regions where dengue is not endemic. Early recognition and supportive care are crucial for favorable outcomes in such cases. Further research is needed to better understand the mechanisms of neurological involvement in dengue fever.

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