

CASE REPORT ON SUSPECTED DENGUE SHOCK SYNDROME WITH THROMBOCYTOSIS

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Abstract

Introduction: Flaviviruses generate infectious diseases, such as haemorrhagic diseases. Dengue fever was also associated to haemorrhagic manifestations, although coagulant episodes are rarely documented. Because of the concomitant neutropenia or thromboembolic tendencies, the pathogenesis of coagulant episodes is complicated, and therapy is complex. Here is a case of active disease accompanied by ilia-femoral deep vein thrombosis and acute neutropenia. Dengue is a virus spread by mosquitos that are highly common in Asian Countries. The Disease usually leads to something like a personality rheumatic fever. Still, many individuals might acquire severe form, including symptoms like hepatotoxicity and extreme kidney damage, renal loss, and liver dysfunction. Infectious agents with venous thrombosis are pretty uncommon.

Primary Symptoms and Important clinical Findings: A three-month Baby was brought with a complaint of fever since one week and convulsion since two days. As told by the mother, the child developed a fever, one week back which was insidious, not associated with chills and rigors, relieved on taking medication.

The Main Diagnosis & Therapeutic interventions & Outcomes: After Physical Examination and Investigations, the Doctor Diagnosed the Case with suspected dengue shock syndrome. Blood tests and Interchange in the blood (plasmapheresis). He developed upon reaching a severe stage of the illness just on the fifth day, systemic inflammatory response fever occurred. They gained a solid understanding of the subject venous blood clot affecting the exterior iliac, main pelvic, and shallow pelvic venous upon that right side as he recovered from the critical phase. Aside from dengue fever, no other reason could have triggered the outbreak. When he was diagnosed with deep vein thrombosis, his platelet count was 31,000 μ l.

Conclusion: Because of investigation, their findings revealed that dengue fever patients have a large magnitude of extended APTT and P.T. As a result, early detection and repair of coagulation disorders may be beneficial in preventing additional difficulties in these patients. After getting appropriate treatment patients symptoms was relieve.

Keywords: Dengue Fever, Thromboembolism, Coagulant, Seizure, infection, Fever

Introduction:-

Flaviviruses produce dengue fever, which is a hemorrhagic disease. Even though it's unknown what variant five connected illnesses affect people, five antigenically related but separate servers have been identified. Virus transmission is caused by bites from albopictus attacked females Aegyptus Mosquitos versus Dengue aegypti. The incubation period is 4 to 10 days. It is found in numerous places, with the largest concentrations in Asia and South America. As of October 18th, there were 55,894 dengue cases with 75 mortality in overall related incidents of infectious diseases. In Sri Lanka, for the year 2019. In comparison until 2018, when just 58 cases of the disease fever are documented. For a entire period, this represents a significant increase in disease burden.¹ Although dengue fever is known to cause haemorrhagic symptoms, only a few instances involving thrombotic events have been described. Brazil has seen the highest number of reported cases so far. From January to March 2011, ninety-two serologically confirmed individuals were investigated, with five of them being diagnosed with big vessel thrombosis, accounting for 5.4 per cent of all dengue patients. We explored additional thrombophilia diseases because haemorrhagic episodes become a type of thrombosis when uncommon acute viral fever sickness occurs. He

had no major prior history of thrombotic episodes. Antiphospholipid antigens, generally pro antibody, coagulation factor or S amounts, or a variation for the clotting trait are all factors to consider. Tests were all false.²

Throughout Bharat, an enteric fever sufferer infection experienced a coagulant episode in the arteries that presented besides results like ischemia. He lacked any traditional elements that increase your chances of having a ischemia. Meningovascularitis was thought besides the cause of this event, additionally, the transitory viral Disease causes thrombus formation. A host of things can play a part if thrombus inside an individual has infectious diseases, albeit significant coagulation episodes were uncommon. Pulmonary embolism clotting, a unique consequence of febrile illness, was described in such an instance. Circulatory imbalance can be caused and worsened by blood clots, significantly exacerbating the situation. As a result, specialists' knowledge of that uncommon consequence is critical in handling exceptionally complex instances of severe Disease-associated systemic dysfunction.³

Three additional examples of thickly veined thrombosis are discovered during research journals. After recovering from acute sickness and increasing their platelet count, all patients experienced deep vein thrombosis. As previously stated, several variables can inside an individual having infectious diseases and play a role or embolism, albeit significant thrombotic events are uncommon. Deep vein thrombosis, a rare consequence of dengue infection, is described in this instance. Hemodynamic instability can be caused or worsened by pulmonary embolism, significantly exacerbating the situation. As a result, physicians must be aware of this uncommon consequence when treating complicated instances of dengue infection with fluid unresponsiveness.⁴

Patient-specific information:

A 03-month baby was admitted to this Tertiary Care hospital on 17/12/2021 with a chief complaint of fever spikes of 100°, mild respiratory distress, cough, seizure for 2 days, and poor intake history.

Medical, family, & psycho-social history:

He belonged to Nuclear Family, and there are three members in his family. All family members are healthy except patient. Patient look tired and weak.

Clinical Finding:

This patient appeared fully alert. His body built was moderate, and had good hygiene.

height :63.5cm

weight :6 kg

Temperature: 100° F

Heart rate : 106/min

Heartbeat: 34/min

Spo2 : 98%.

Diagnostic Assessment:

The basic patient history, physical examination and investigations were done. his platelet count was 31,000 μ l. Dengue antigen test non structural protein test positive.

Diagnostic challenges: No any challenging during diagnostic evaluation.

Diagnosis: After physical examination and Investigations doctor diagnosed this case as Suspected dengue shock syndrome NS1 positive.

Prognosis: Was good.

Therapeutic Intervention: -

Medication advised were Inj. Cefotaxime 300mg (IM 20ml NS), Inj. Vancomycin 120mg (IM 30ml NS), Syp. Phenytoin 2.5ml, Syp. Solving cold 2.5ml, Syp. Decal 2.5ml, Syp. Rinifol-Z 2.5ml, Nasoclear Drop 2, N.S. Nebulization. Hb9.2gm, Platelet 31,000/ μ l.

Also he was provided the clean environment, Given medication to patient as per doctor orders. They were given nebulization with N.S.

Interventions, adherence & tolerability:

The patient took all prescribed medication regularly.

} Avoid heavily populated residential areas.

} When indoors, stay in air-conditioned or screened

Discussion:

The patient was observed with low platelet count and low blood count at the time of admission. The patient hematology and biochemical parameters are observed at regular intervals. The serological findings such as IgM and IgG were found positive, which confirm the presence of dengue. The patient was diagnosed with dengue fever and advised for proper rehydration therapy.

Increased vascular permeability and poor hemostasis are hallmarks of dengue illness. Dengue infections affect platelet function as well. Coagulopathy can be caused by various factors, including insufficient platelets, abnormal

Liver, Stent, or Activated partial thromboplastin. Destruction well to hepatocyte sit reduces a production of disintegration factors, which can affect Both Pts or Activated partial thromboplastin methods are two different types of technologies. Both clinical presentations, as well as Stent, were two tests being used to determine if a person is healthy, indications to the coagulation system's Routes that are both tangible or intangible. Then down-regulation to a particular factor synthesis or an increase in specific factor consumption could cause prolonged P.T. and APTT.⁵

Its semi factor-1 (Fibrinogen) within the infectious agent may attach to each coagulant nor clotting. Affiliation with coagulation has no effect, but inhibiting prothrombin activation does. This could explain why APTT alterations occur before the immunity produced. The Disease is one term used to describe a condition in which the body evidenced with a prolonged, therapeutic index is the abnormality within that basic metabolism coagulation passage that only takes place a few days during the Disease. During infectious diseases, neutropenia might occur. Infection may be attributed such as bone marrow. Throughout this bacteria's initial injury, mental health problems are common. Other possibilities include virus infection of the megakaryocytes, which results in enhanced platelet destruction. Alternatively, existence antiplatelet antigens are one protein that targets neutrophils.⁶

The primary goal of that conceptual and detailed description was to evaluate the global scope of epidemic illness is associated with circulation problems. Because Infection was among the most underappreciated, illness information may aid in developing effective intervention programmes and effective care for individuals as soon as possible. The Disease becomes a virus that spreads through an infected Aedes mosquito bite through the body. Upon eating the plasma of a human host, individual since the onset of rheumatic fever, the female Aedes mosquito becomes infected with the viral fever virus. The Disease seems to be the most frequent virus spread by mosquitos. Disease tropical areas of an entire universe right now.⁷

According to WHO estimates, around viral Disease affects 1 billion people each year. Around the world, with there must be 50 million ones living in elevated zones. Approximately Viral Disease affects 100–150 thousand individuals each year, with 500,000 instances of Tropical viral Disease (Dengue shock syndrome) or at least a thousand mortality each year⁸. Adolescents account for 90% of all mortality globally under the age of 15. Delayed Seek effectively, Iii, increased coagulation factor or decreased collagen polymerization were also seen and documented to impact coagulation and anticoagulation processes. The reduced production of particular components in the intrinsic route could be due to dysfunction of the injured liver.⁹⁻¹¹ A number of cases on Dengue with complications were reported¹²⁻¹⁶.

However, according to other research, the Disease's age distribution has migrated to older age groups. In a country where dengue fever has to be adequate care for individuals as soon as possible, Disease becomes a virus that spreads through the body and is prevalent for a long time. The illness burden will be borne primarily by infants and children aged 5 to 9. There were certain limitations to this study that should be considered. The researchers didn't look into the possible causes of extended APTT; sick people with infectious diseases have neutropenia. Furthermore, the findings of this study did not include a summary of factor deficits in individuals with Disease. Items that were only updated daily have been considered.⁹

Conclusion:

Because of investigation, their findings revealed that dengue fever patients have a large magnitude of extended APTT and P.T. As a result, early detection and repair of coagulation disorders may be beneficial in preventing additional difficulties in these patients. Angiogenesis was one documented side effect of the infectious agent, which enables microorganisms to penetrate the bloodstream, immune system failure, therefore decreasing with terms of many atoms, and cytokine dysregulation, which predisposes patients to secondary bacterial infections. As a result, it's critical should become conscious of risk of significant pneumonia that occurs as a consequence of mosquito pathogens, particularly for people suffering from long-term Severe kidney impairment associated illness, as well as the probability of thrombotic events as a result of Dengue viral infections.

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