



## **Dengue Fever in UAE Resident with no Travel History: A Case Report**

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**Abstract**

*There are larger number of people who come to UAE every year from dengue endemic regions and multiple cases have been reported in travellers to endemic areas. We report a case of dengue fever in resident of dubai with no history of travel. She presented with history of fever, body pains and headache of 5 days duration and initial labs revealed leucopenia and thrombocytopenia. Extensive workup was done which did not reveal any source of fever, dengue profile was sent and IGM came out positive suggesting acute infection.*

*Key words-dengue, UAE.*

**Case Report**

58 year old female who is a known case of Type 2 DM, Hypertension and dyslipidemia. She presented with complains of fever, headache and body pains of 5 days duration. There was no history of recent travel. Patient was transferred from other hospital where lumbar puncture was done in view of severe headache but was normal and she was started on meropenam and vancomycin empirically, she was shifted to our hospital as per her request. Patient was hemodynamically stable and her systemic examination was unremarkable. Her labs revealed Hemoglobin of 15.3g/dl, wbc 1.74 and platelet count of 64,000, CRP 34.80 mg/L, AST-60U/L and ALT 40U/L, Her procalcitonin was 0.05(negative) and blood and urine cultures were sterile, IGM EBV and CMV were negative. Her chest Xray and abdominal ultrasound were unremarkable. Her ANA also was negative. IGM dengue turned out to be positive, her antibiotics were stopped and only symptomatic treatment was given. Patient gradually improved and became afebrile, her platelet count and WBC improved and was discharged.

## Discussion

Dengue virus belongs to the family of flaviviridae. Dengue fever is a public health concern and gained particular interest from World Health Organization (WHO) (1). Dengue is transmitted to humans through bite of *Aedes* mosquitoes especially *Aedes aegypti* and *Aedes albopictus* (2). The clinical manifestations of dengue are varied (3). After an incubation period of 3 to 14 days, the individual may be asymptomatic or may present with mild undifferentiated fever to severe disease that includes hemorrhagic and hypovolemic shock (3,4). Climate conditions in the Middle East and North Africa (MENA) (extremely dry weather) were historically not favourable for the disease vector (5). Climate change may promote the spread of the *Aedes* mosquitoes into geographical areas previously thought to be unfavourable for the vector (6). Changing mosquito ecology, globalisation of trade and a remarkable increase in the volume of air travel have all influenced dengue epidemiology. Reports of travellers acquiring dengue are increasing, as are reports of autochthonous cases presenting in non-endemic areas where the mosquito vectors have become newly established (7). Autochthonous spread has been reported from the south of France and Croatia, and in 2012 the first European dengue outbreak since the 1920's occurred in Madeira, resulting in over 2,000 cases and 120 hospitalisations (8).

In the early febrile phase dengue presents with clinical features similar to malaria and a wide variety of bacterial and viral infections (9). A detailed travel history is important, focused on timing and duration of stay in endemic areas, dengue seasonality and epidemic activity in the places visited, and predominant urban or rural stay (10). Simple laboratory investigations may help distinguish dengue from other infections, but are not definitive. Thrombocytopenia occurs almost universally, with a nadir around defervescence, and can help differentiate dengue from infections like influenza, measles and rubella. Leucopenia and a mild transaminitis are also seen, but other laboratory parameters are generally unaffected unless complications develop. The diagnosis of dengue fever is confirmed by serologic tests defined by a 4-fold increase in acute - and convalescent - phase anti-dengue IgG titers or detection of IgM to dengue virus. Culture of the virus is technically difficult. Amplification of dengue RNA by reverse transcription-polymerase chain reaction is available in research settings for confirmation and surveillance (11).

No specific antivirals or adjunctive therapies have shown benefit, so management relies on symptomatic and supportive treatment (12,13). This involves meticulous fluid balance and cautious intravenous fluid replacement for patients unable to tolerate oral fluids and those identified to have significant plasma leakage.

The minimum volume of parenteral fluid should be given to achieve adequate organ perfusion while avoiding the well-recognised complication of fluid overload. Oral paracetamol can be given but NSAIDs should be avoided due to the risk of gastrointestinal bleeding.

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