DENGUE FEVER IN IRAN. A CASE REPORT

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Abstract

Dengue fever is a viral disease transmitted by mosquitoes and is self-limiting in most cases but can be severe and fatal. This disease is endemic in Southeast Asia and its outbreak occurs there every 2-3 years. The present paper aims to show the occurrence of isolated cases of this disease in Iran and prevents the wide spread and serious epidemic that may happen in the future through quick diagnosis and other health measures. This study was based on a report about a 52-year-old man who suffered from fever and headache, maculopapular rash on the chest and upper limbs, runny nose, and muscle pain three weeks after returning from Bahrain into Iran and his tests confirmed leukopenia (2900) and thrombocytopenia (9700). The patient’s blood sample was sent to Pastor Laboratory for dengue fever test and the result was positive. Although this is the third registered reported case in Iran, in this case, unlike previous ones, patient had been bitten by an infected mosquito inside Iran. Generally, this disease should be strictly tested and controlled in people who are returning from endemic areas, in the tropical regions and when it is raining, and in patients who exhibit fever and other symptoms.

Keywords: Dengue fever, Bandar Abbas, Iran.

Introduction

Dengue fever is an infection caused by Arboviruses. Involving different countries, it is considered a major public health problem all over the world. Although dengue is one of the most important mosquito-borne viral diseases, it is clinically seen as a nonspecific disease or Dengue Hemorrhagic Fever (DHF), Dengue Shock Syndrome (DSS), and dengue epidemic.

However, this disease can emerge as unusual manifestations such as hepatitis, encephalitis, myocarditis, Reye’s syndrome, hemolytic-uremic syndrome, and thrombocytopenic purpura. This disease is so important that it is suggested that various plans should be made to prevent it because different countries are involved with it.

Nowadays many factors have increased the prevalence of this disease such as international travels which can introduce new species to different parts of the world. Other factors may include urbanization, crowd, overpopulation, and poverty. Almost many new cases of this virus occur every year. When the infection occurs, it can emerge as an undifferentiated disease, dengue fever, or dengue hemorrhagic fever. In this study, once incidence of this disease has been reported in Iran.

Patient introduction

The patient is a 52-year-old man with mellitus diabetes mellitus and high blood fats under no medication. The patients, who is self-employed in Bahrain (shopkeeper), had traveled to Iran about
three weeks before the onset of symptoms. The main complaint of the patient was fever which had started two days before admission, with bilateral frontal headache and skin rashes on the chest and both upper limbs. Muscle pain, runny nose, and pain in the right knee were mentioned by the patient but there was no complaint about shortness of breath, cough, sputum, abdominal pain, and vomiting. He did not have any record of diary consumption or contact with livestock and similar symptoms were not observed in his family members. On physical examination, the patient appeared an ill middle-aged man, with a tongue temperature of 38°C (he had taken acetaminophen at home) and a pulse rate of 89 beats per minute. Maculopapular rashes on the chest and both upper limbs, stiff neck, exudate, and right knee pain were observed, while lymphadenopathy, nasal oromucosal bleeding, and organomegaly were not found. In addition, lung sounds and auscultation were normal. The examinations showed that patient’s blood sugar was 297 mg/dl and liver enzymes were at normal level. Also, the tests results showed leukopenia, thrombocytopenia, ESR: 26, and CRP: 3+. Acidosis was not confirmed in tests. In urinalysis, glucosuria was confirmed but ketonuria was rejected and also there was no evidence of infection. The result of malaria RDT test was negative. To rule out meningitis, LP (lumber puncture) test was asked to be performed but the patient refused. Three days after hospitalization, patient’s fever stopped and his headache, body pain, leukopenia, and thrombocytopenia gradually got better. Finally, the patient was discharged with a good general condition. The patient’s blood sample was sent to the reference health laboratory in Tehran for serologic test (ELISA). IgM was reported positive on the test result. Patient follow-up to 5 weeks indicated that he is in a good condition.

Discussion and conclusion

Dengue fever is a viral disease which is endemic to Southeast Asia and there is an epidemic of this disease there every 2-3 years\(^9\). The first outbreak of dengue fever occurred in 1989 in Sri Lanka. In 1980, the hemorrhagic type of dengue fever was found in China, Indonesia, Thailand, and Malaysia\(^10\). Recently, epidemic of this diseases has been reported from India (1990)\(^11\). The first documented report of this disease was in Pakistan in 1985 and its first epidemic occurred there 10 years later (1994-1995)\(^12\).

Another outbreak occurred in 2006 in Karachi after a heavy rain, in which 62% of patients were afflicted by the hemorrhagic dengue fever and 3% of them died\(^13\). The first case of dengue fever in Iran was reported in 2008 from a 61-year-old man a few days after his returning from a trip to Malaysia\(^14\). In a study conducted by Chinikar et al. (2013) in Iran, blood samples from 300 patients that had been tested for Crimean Congo hemorrhagic fever between 2000 and 2012 were again tested for dengue fever. The result of serology in 15 patients (5%) and serology and PCR in 3 patients (1%) was reported positive. According to this study, 8 patients had a history of travel to endemic countries and 6 patients were a native of Sistan & Baluchestan Province, which neighbors Pakistan.

Although this is the third reported case in Iran, given the incubation period of this disease and the duration the patient has been in Iran, it is strongly under question that whether an infected mosquito inside Iran has stung the patient or not. However, previous studies indicate that there were cases in which the disease had been transmitted by infected mosquitoes from other countries. Studies also suggest that there may be un reported and undetected subclinical cases in Iran. Given the periodic outbreaks of this disease every 2 to 3 years in South East Asia and recent outbreaks in neighboring countries, physicians are recommended pay a special attention to the above-mentioned epidemiological symptoms in patients especially in the tropical regions and when it is raining in order to prevent the wide spread and serious epidemic that may happen in the future through quick diagnosis and other health measures.

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