

A Case of Dengue Fever with Diet Management

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Abstract

Dengue is the major cause of arthropod- borne viral disease in the world. It presents with high fever, body ache, rash, myalgia and arthralgia. It is an arboviral infection spread by the Aedes Mosquito with a wide spectrum of presentations encompassing flue – like illness to hemorrhagic manifestations. We present a case of a 43 year old female with dengue fever. In addition, we conducted an extensive review of the literature to elucidate pathophysiology, diagnosis and diet management in this condition. The purpose of this study is to provide a general overview of the virus, followed by diet management to help in health of patient.

Keywords: High fever, Body ache, Diet management.

1. Introduction

Dengue fever is one of the most prevalent mosquito – borne viral infections affecting humans, with multiple outbreaks recorded present year. Dengue virus belongs to the Flaviviridae family, which is a single stranded positive sense RNA virus. Dengue virus has four strains, all of which are spread by Aedes mosquito. Although most of the infections are self limiting and asymptomatic. Dengue virus can lead to grave complications such as dengue hemorrhage fever and dengue shock syndrome. Certain serious complications such as myocarditis, encephalopathy, liver failure, splenic rupture, acute kidney injury, pancreatitis and muscle hematoma also associated with dengue fever [1-6].

2. Case Presentation

We presented a 43 year old female dengue positive with generalised body pain and high fever for two days. Other complaints such as headache, retro-orbital pain and myalgia of twelve days durations (16 Oct. – 27 Oct. 2023). The patient reported high grade intermittent fever for the two days that was associated with rigors and chills. Her other complaints included dark yellow colour urine, chest pain, shortness of breath, vomiting, sore throat, adominal pain diarrhoea, burning micturition, dysuria and blood clots come through nasal cavity in the morning. On physical examination the patient was vitally stable oriented to person, place and time and had mild conjunctival pallor. On skin examination, therefore no multiple purpura and tetchial. The rest of the systematic examination was unremarkable. She was treated with intravenous fluid therapy, supportive measures, diet modification and gradually improved in health.

First pathological report of the patient was haemoglobin 8.7 gm/dl, total RBC count 4.01 million/mm³, total WBC count 2500 /mm³, platelet count 167000 /mm³ and NS I Ag positive. The patient was under the supervision of MD medicine specialist with five day medicine course.

Second pathological report of the patient was haemoglobin 9.1 gm/dl, total RBC count 4.27 million/mm³, total WBC count 2700 /mm³, and platelets count 108000 /mm³. This report showed low platelets count than first pathological report. It is created stress for patient and her family.

After second pathological report dietary modification of patient's diet. Such as 50 ml papaya leave juice twice a day, citrus fruit juice orange in a day and fruit kiwi twice a day added in normal patient diet.

Fifth pathological report after seven days of dietary modification of the patient showed haemoglobin 9.4 gm/dl, total RBC count 4.40 million/mm³, total WBC count 6600 /mm³ and platelet count 312000 /mm³. These all shows in normal reference values except haemoglobin. The patient condition is better still felt weakness only that recover with time duration.

Patient's Pathological report as following:

Pathological Report: Hemogram

Test Name	Result 1	Result 2	Result 3	Result 4	Result 5	Units
Haemoglobin	8.7	9.1	9.3	9.6	9.4	gm/dl
RBC Count	4.01	4.27	4.38	4.38	4.40	million/mm ³
WBC Count	2500	2700	3200	3400	6600	/mm ³
Platelets Count	167000	108000	111000	117000	312000	/mm ³

3. Discussion

Dengue fever is a mosquito borne tropical infection with an increasing number of cases of present year. Dengue fever has variable clinical manifestations and usually presents with abrupt onset high grade fever, myalgias, arthralgia, headache and retro-orbital pain [7-8]. Dengue hemorrhagic fever is classified into four grades depending on the severity of clinical manifestations.

1. Grade I: Positive tourniquet test without any bleeding
2. Grade II: Clinical evidence of bleeding such as ecchymosis or rarely, bleeding into internal organs like lungs and central nervous system.
3. Grade III: Hypotension with rapid, weak pulses causing circulatory failure.
4. Grade IV: Presents with shock [9-10].

Dengue hemorrhagic fever grade III and IV are also known as dengue shock syndrome. One study underscored the role of platelet activating factor in the pathogenesis of dengue hemorrhagic fever via activation of endothelial cells and increased vascular permeability. This was further supported by measuring platelet activating factor levels in dengue virus infection during its different phases, which revealed higher levels of PAF during the hemorrhagic phase as compared to the febrile phase [11]. The risk of developing DHF is significantly increased in patients having a recurrent infection from dengue virus. Strain different from the one causing primary infections. The most likely mechanism is that the antibodies formed against the dengue virus. Serotype during primary infection enhance viral uptake and replication of the new serotype instead of suppressing it [7]. Platelets should be transfused only when levels drop significantly, i.e. less than 20,000 without hemorrhage or 21000-40000 with hemorrhage [12].

4. Dietary Management

Diet chart of patient

Time	Menu	Amount gm/ml
7.00 AM	Papaya leaf juice	50 ml
9.00 AM	Coconut water	150 ml
12.00 PM	Porriadge or khichadi	1 plate (50 gm)
3.00 PM	Citrus fruit juice or Kiwi and papaya fruit	150 gm
6.00 PM	Papaya leaf juice	50 ml
7.00 PM	Mix vegetable soup	100 ml
8.00 PM	Vegetable	100 gm
8.00 PM	Chapatti	30 gm
9.00 PM	Milk	100 ml

The diet should be taken by patient eleven days. The health condition of patient improved and pathological report confirmed the status of fever. Dietary modification has major role to improve patient condition because diet play role such as papaya leaf juice help in increasing platelets in dengue. Coconut water is essential for avoid dehydration in patient's body. Iron rich foods such as leafy vegetables and citrus fruits help in providing and absorption of iron and immunity boosting. Porriadge or khichadi and vegetable soup easy to digest and providing nutrition for patient. Drink 100 ml of milk to enhance nutrition of patient. Bland and easy to digest diet is suitable for patient because loss of appetite and poor digestability.

5. Conclusion

Dengue fever is a common tropical infection. Recognizing complications such as body pain, headache, fever with rigors and chills, vomiting and loss of platelets are important to prevent mortality with treatment diet management has major role to improve health condition of the patient.

6. Reference

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