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Dengue Fever and Ayurved: A Case Study

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ABSTRACT

Dengue is the most common mosquito borne viral infection (caused by Dengue type 1, Dengue type 2, Dengue type 3, and Dengue type 4 of the genus Flavivirus and Chikungunya virus) in Chennai, which had an outbreak due to seasonal and monsoon changes. Infection with one of the serotype provides immunity to only that serotype of life, to a person living in a Dengue-endemic area can have more than one Dengue infection during their lifetime. Description of dengue as *Dandaka Jwara* is found in the *Madhava Nidana*. Its increasing prevalence is due partially to increased awareness and better diagnostic methods, because if it's untreated, it can lead to fatal effects. We report a case of severe dengue fever with thrombocytopenia where the patient showed remarkable improvement through *Ayurvedic* treatment along with patient counseling.

KEY-WORDS: Dengue, *Dandaka jwara*, Thrombocytopenia, Public awareness.

I. INTRODUCTION

The dengue virus is a flavi virus that utilizes positive, single stranded RNA and a mosquito vector. Female mosquitoes of the genus Aedes (specifically, Aedes aegypti and Aedes albopictus) are known to transmit the virus[1]. The mosquito must first acquire the virus by feeding on an infected host while a significant amount of virus is present within the blood. For the host, this typically occurs prior to symptom onset[2].

After the blood meal, the virus requires approximately 8-12 days to incubate before it can be transmitted to a new host. The mosquito can transmit the virus more than once, since it will remain infected for the remainder of its life. In some instances, human to human transmissions have occurred through direct contact with blood, as occurs during organ transplantation, blood transfusion, and placental blood exchange[2].

After becoming infected, the host will remain symptomless for about 4 to 6 days. During this period, the virus is incubating and growing in number. During this time frame, an uninfected mosquito can pick up the virus during a blood meal and then transmit it to a new host. After the incubation period, the period of illness commences and runs its course for about 3 to 10 days. Signs and symptoms are generally flu-like[3]. Patients typically report severe headaches, muscle pain, joint pain, pain behind the eyes, nausea and vomiting[1].

II. CASE REPORT

A 25 years old male patient was admitted in the male *Kaya chikitsa* ward of Rajiv Gandhi Educational Society *Ayurved* medical college & Hospital, Ron with the chief complaints of fever, body ache and loose stools for 4 days. The patient seems to be lethargic, conscious and oriented with fluctuated vitals.

III. 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 confirms the presence of Dengue. The patient was diagnosed with dengue fever and advised for proper dehydration therapy. The patient was initiated with *Mahasudarshan Ghana vati* 2 BD, *Giloy Ghana vati* 2 BD with *Shunthi sadhita* water, Syrup Amyron 20 ml BD, Tablet Acidon 2 BD as prophylactic therapy. The patient was counseled accordingly as regular sit-ups, with points focusing disease condition, Therapy prescribed. The patient counseling points includes life style changes along with dietary restrictions. There is no vaccine to prevent dengue[5].

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Prevention centers on avoiding mosquito bites when traveling to areas where dengue occurs and when low sanitation, where dengue might occur. Eliminating mosquito breeding sites in these areas is another key prevention measure.

- ❖ Avoid mosquito bites when traveling in tropical areas:
- ▪ Use mosquito repellents on skin and clothing.
- ▪ When outdoors during times that mosquitoes are biting, wear long-sleeved shirts and long pants tucked into socks.
- ▪ Avoid heavily populated residential areas.
- ▪ When indoors, stay in air-conditioned or screened areas.
- ▪ Use bed nets if sleeping areas are not screened or air conditioned.
- ❖ Eliminate mosquito breeding sites in areas where dengue might occur:
- ▪ Eliminate mosquito breeding sites around homes.
- ▪ Discard items that can collect rain or run-off water, especially old tires.

Regularly change the water in outdoor bird baths and pet and animal water containers[6].

Table 1. Relevant hematology and Lab parameters by day of admission

S.No	Lab parameters	Units	Day 1	Day 7
1.	WBC	/cu.mm	2300	6900
2.	RBC	10^6/µl	4.15	4.51
3.	HCT	%	38.55	40.21
4.	HB	g/dl	14.1	14.9
5.	MCV	fL	92.89	89.16
6.	MCH	pg	33.98	33.04
7.	MCHC	g/dl	36.58	36.98
8.	PLT	/cu.mm	67000	170000
9.	Neutrophils	%	84	67
10.	Lymphocytes	%	12	30
11.	Eosinophils	%	02	01
12.	Monocytes	%	02	02
13.	Basophils	%	00	00
14.	Absolute Eosinophils	/cu.mm	46.00	69.00

IV. CONCLUSION

Although dengue fever itself has low mortality and morbidity, its severe forms – dengue shock syndrome and dengue hemorrhagic fever- are more life-threatening. Subsequently, available treatment methods may not entirely suffice, since they address the effects of the disease (ex: low fluid volume) rather than its cause.

The present case was aimed to focus on the *Ayurvedic* treatment and counseling points for dengue, which made a remarkable improvement in the patient and we take this measure as a community awareness perspective to spread awareness which can avoid the outbreak of Dengue.

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