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## A CASE STUDY OF DENGUE FEVER WITH AYURVEDA LINE OF MANAGEMENT

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### Abstract-

In terms of morbidity and death, Dengue is regarded as the mosquito-borne arboviral illness With the greatest worldwide Public health concern. It has a large negative socioeconomic and health impact on many tropical and subtropical regions of the world. Dengue fever has no acknowledged specific treatment in modern medicine as of yet. Dengue fever and *visham jwara* are connected in *Ayurveda*. A number of formulas are listed in *Jwara Prakaran* and have been attempted, validated experimentally, and documented by contemporary researchers, demonstrating their efficacy. A case study of dengue fever that was well treated with ayurvedic drugs was conducted. The patient's symptomatology and haematological profile both significantly improved. Thus, it was determined that ayurveda may treat dengue fever effectively and without any negative effects.

**Key words-** Dengue fever, Break-bone fever, Case report, Ayurveda treatment, Vishama Jwara

## Introduction-

Regarding morbidity and mortality, dengue is regarded as the most serious mosquito-borne arboviral disease in the world. It is brought on by one of four serotypes of the flavivirus genus that are closely linked to one another. According to pinheiro (2017), it is the most pervasive viral hemorrhagic fever in the world and has a large negative socioeconomic and health impact on many tropical and subtropical parts of the globe.

Even though 50 to 100 million new cases of dengue are predicted to occur annually (gubler, 2006) and over half of the world's population is at risk for the virus, dengue incidence has climbed 30 fold over the past 50 years.

The term "dengue serotype" refers to a group of four closely related dengue viruses. Although recovery from infection confers immunity from the same dengue serotype, a number of persistent effects, including joint pain, sluggishness, and decreased resistance to infectious diseases, have been observed when it is treated with contemporary medications (lalla, 2014). The risk of dengue hemorrhagic fever will rise after receiving the dengvaxia dengue tetravalent live vaccine <sup>[1]</sup> according to a study, the true number of dengue cases in india was 282 times higher than what the national vector-borne illness management programme recorded <sup>[2]</sup>. A case of fever discovered after a positive dengue test was promptly treated with just ayurvedic treatment, resulting in only mildly severe symptoms. After receiving therapy for 4 days using exclusively ayurvedic medications since the beginning of his illness, and he was discharged.

## Case report-

A 5 year-old male patient presented with a fever and generalised body pain as his main complaints came to KLE'S Ayurveda hospital Shahpur belagavi (kaumarbhritya opd). When questioned, informant (mother) admitted to being largely asymptomatic until 14<sup>th</sup> aug.2021, when he started experiencing a little sore throat, body ache, and a loss of appetite. After two days, he had a high grade (102 degree f) fever that was accompanied by chills and a severe headache. He also took medication for generalised bodyaches and weakness, which were further related symptoms. But there were no any significant relief, with this background, he arrived at our hospital for further management.

On examination, he was febrile (101.3 degree f.), had pulse rate of 92/minute, regular with good volume and blood pressure of 100/66 mm of hg. In systemic examination, there was tenderness in epigastric region only. He was subjected to various routine laboratory investigations and was diagnosed as a case of dengue fever (positive ns1 antigen and ig test). Other blood investigations revealed leucopenia (3800 cells/cumm) and thrombocytopenia (platelet count 1,57,000 cells/cumm).

### Management

He was admitted to the same department's IPD and started receiving Ayurvedic treatment along with a light diet and lots of fluids. Hemogram was instructed to do daily.

After four days, the patient's haematological profile significantly improved, and his symptoms subsided without any complications.

**Table 1. Line of treatment given to the patient**

Sr no.	Drug used	Form of drug	Dose	Time
1	Guduchi	Ghana vati	125 mg	Three times in a day
2	<i>Patola</i> <i>Katuki</i> <i>Rakta chandana</i> <i>Patha</i> <i>Murva</i>	Kashaya	5 ml	Three times in a day

**Table 2. Date wise symptoms with haematological profile of the patient**

Date	16-08-2021	17-08-2021	18-08-2021	19-08-2021
Symptome	Sore throat , bodyache , high grade fever , headache , loss of appetite , weakness	Low grade fever , reduction in other symptomes	Low grade fever ,reduction in other symptoms	No fever episodes , no intensity of headache and no weakness
Tlc	3000	3500	3020	6000
Platelets count	87000	98000	1,51000	2,50000

**Table 3. Effect of therapy (based on grading)**

<b>Sr. No</b>	<b>Symptomes</b>	<b>Before tretament</b>	<b>After treatment</b>
1	Fever	4	1
2	Bodyache	3	0
3	Headache	3	0
4	Haematological profile	4	0
5	Platelate	1	0

**Assessment criteria and observations.** [3]**Fever grade**

- high (102-104 degree f)4
- moderate (100-102 degree f)3
- Low (99- 100 degree f)2
- very low (up to 99 degree f)1
- No fever0

**Headache grade**

- Severe, requires medicine4
- moderate3
- mild2
- Occasional1
- No headache0

**Bodyachesgrade**

- Severe, hamper routine work4
- Moderate3
- mild2
- Occasional1
- No bodyaches0

**Hematological profile:**

- Tlc grade 3000-3500 cells/cumm4
- 3500-4000 cells/cumm3

- 4000-4500 cells/cumm2
- 4500-5000 cells/cumm1
- more than 5000 cells/cumm0

### **Platelet countgrade**

- less than 50,000 cells/cumm4
- 50,000-65000 cells/cumm3
- 65000-80000 cells/cumm2
- 80000-95,000 cells/cumm1
- more than 95,000 cells/cumm 0

### **Discussion**

In the state of modern research, there is no specific antiviral treatment for dengue fever. For the past few years, supportive therapy with analgesics, fluid replacement, bed rest, and other symptomatic treatment with nsaids have been used to manage it <sup>[4]</sup> by antipyretic drugs, temperature tends to raises further more once the effect of drug has over, intended to trigger immune mechanism to fight against invaders. Repeatedly suppressing the fever will open the gateway for invaders to get deep route in to the system with a significantly greater risk of developing severe disease<sup>[5]</sup>

Fever is known as jwara in ayurveda when the body temperature rises over the normal range and is accompanied by disturbances in both the body's and mind's regular functions. This condition is referred to in the scriptures as "manaso-deha santapa." it can be associated with visham jwara because of its bhootaabhishanga nidana (viral infestation), visham aarambh (fever- rapid onset or onset after nonspecific symptoms), visham kriya (fever with or without chills and rigours), and visham kala (irregular length or interval of fever).

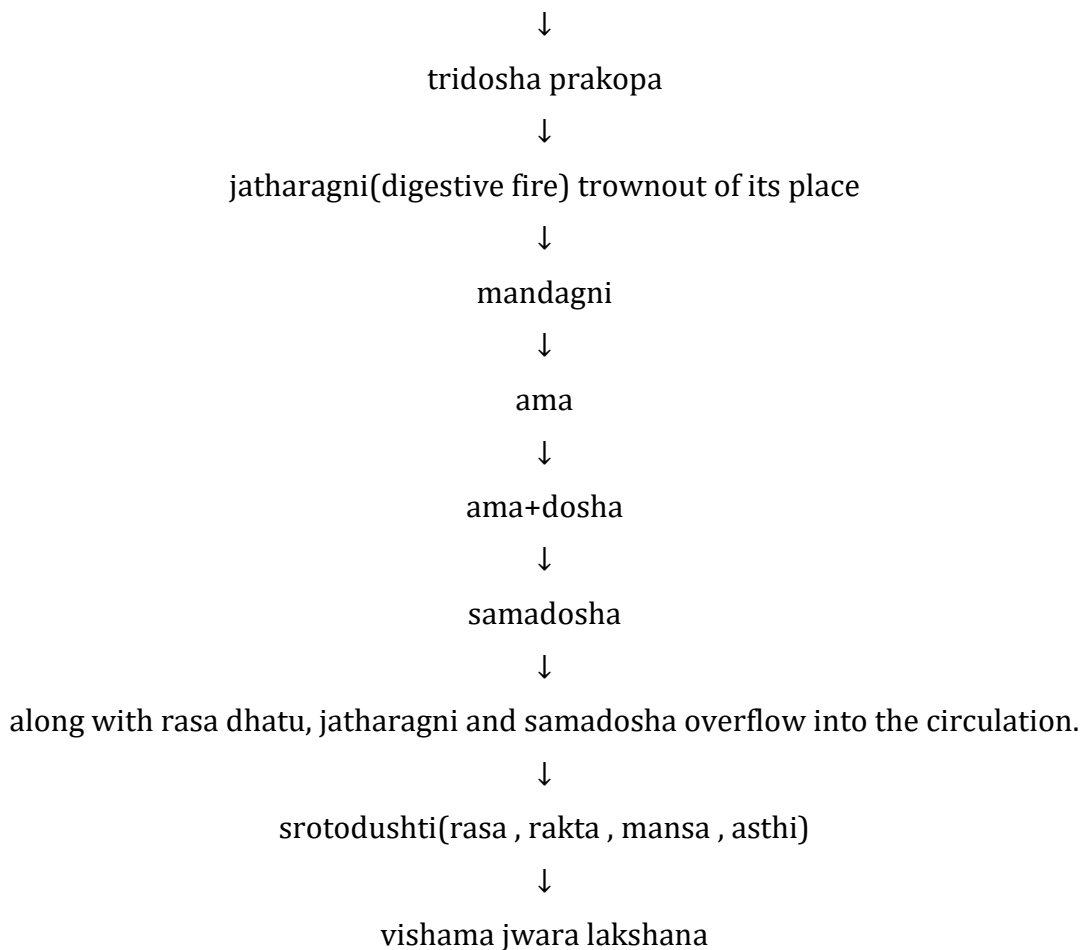
In Ayurveda, the primary goal of Chikitsa is to achieve Vighatana of Vyadhi Samprapti or dosha dushya sammurchhana. Managing Jwara (fever) can be done by Langhana (fasting or eating lightly) keeps the Agni (metabolic fire) balanced. Swedana (sudation) removes toxins or metabolic wastes from the body. Yavagu Sevan, helps the digestive system.

Tikta Rasa Bheshajam (the use of bitter-tasting) Due to the deepana guna Ama Pachana (drugs that correct a dysfunctional metabolism), tikta rasa aids in calming the digestive fire.

Due to their tikta rasa, all of these medications raise agni (the digestive fire) which improves agnimandya and samadosha conditions. Patola katuki, patha have laghu guna along with ruksha guna which is just opposite to guru and picchila guna of ama (formed product due to abnormal digestion and metabolism). Both laghu and ruksha guna helps in alleviate symptoms of ama dosha. Other than this guduchi, patola, patha, murva has pachan guna which clears ama from samadosha, making all doshas in nirama state. Guduchi is termed as rasayana in ayurveda to combat the immunosuppressive condition. Which has been highlighted in particular in jwara chikitsa prakaran, has ushna virya been utilised so well in jwara's amaj condition.

### **Samprapti (pathogenesis in Ayurveda)<sup>[6]</sup>**

**Agantuj nidana (external etiological factors like bite of ades aegypti) + mithya ahar vihara sevana**



## Drug review

Drugs	Rasa	Guna	Virya	Vipaka	Karma
<b>Guduchi</b> <sup>[7]</sup> ( <i>Tinospora cordifolia</i> )	Tikta, Kashaya	Guru , Snigdha	Ushna	Madhur	Amapachaka Jwaraghna , Tridoshahara
<b>Patol</b> <sup>[8]</sup> ( <i>Trichosanthes dioica</i> )	Tikta	Laghu , Ruksha	Ushna	Katu	Tridoshahara Jwarahara
<b>Kutaki</b> <sup>[9]</sup> ( <i>Picrorhiza kurroa</i> )	Tikta	Laghu , Ruksha	Sheeta	Katu	Deepaniya Jwarahara
<b>Rakta</b> <sup>[10]</sup> <b>Chandana</b> ( <i>pterocarpus santalinus</i> )	Madhura , Tikta	Guru , Ruksha	Sheeta	Katu	Jwaraghna
<b>Patha</b> <sup>[11]</sup> ( <i>Cissampelos pareira</i> )	Tikta	Laghu , Teekshna	Ushna	Katu	Jwaraghna , Shoolaghna , Dahaghna
<b>Murva</b> <sup>[12]</sup> ( <i>Marsdenia tenacissima</i> )	Kashaya	Guru , Ruksha	Ushna	Katu	Vishama Jwaraghni Tridoshahara

## Conclusion-

The example suggests that the formulations had a noticeable therapeutic effect on the febrile dengue illness as well as other related symptoms. Along with this, the medications also reversed thrombocytopenia and leucopenia within 4 days. During the admission, there were no negative effects noticed. However, additional research is required to notice the effects of the aforementioned formulation in other febrile diseases as well as secondary; the study should be conducted on a larger number of patients and over a longer period of time to note other advantages.

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