

## **CHIKUNGUNYA AND ITS MANAGEMENT; AN AYURVEDIC APPROACH**

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### **ABSTRACT**

Chikungunya is a viral disease transmitted to humans by infected mosquitoes. It is an RNA virus that belongs to the Alpha virus genus of the family Togaviridae. This infection presents with fever along with severe joint pain. Other symptoms include muscle pain, joint swelling, headache, nausea, fatigue and rashes. A probable correlation in Ayurveda is *Sandhiga Sannipata Jvara* because of the similarities in symptoms like fever, arthralgia, nausea, swelling and tenderness of joints. Ayurveda offers treatments which may be rationally used to combat the conditions in clinical scenario.

**Key words:** *Chikungunya, Sandhiga Sannipata Jvara*

### **INTRODUCTION**

Jvara in Ayurveda is defined as the santapa of *Deha* (body) *Indriya* (sense organs) and *Mana* (mind). It is considered as prime among all diseases in Ayurveda. The concept of communicable diseases is well stated in Ayurveda. Acharya Charaka has mentioned about the occurrence of '*Janapadodhwamsa*' and its influencing factors like *Jala* (water), *Vayu* (Air),

*Desha* (place/soil) and *Kala* (Time). The vitiation of these factors are considered responsible for the production of Infections and communicable diseases at large. Currently, Water (including mosquito) borne, Environmental, Seasonal and Epidemic disorders can be categorized under *Janapadodhwamsa vyadhi*.

Chikungunya, a mosquito borne viral disease is caused by an Arbo virus and

transmitted by *Aedes aegypti* mosquito. Chikungunya virus was first described in 1952 during a febrile illness outbreak in Makonde, a province in southern Tanzania<sup>1</sup>. The word "chikungunya" comes from the Bantu language of the Makonde ethnic group from Tanzania and Mozambique and refers to the curved position of the patient due to debilitating joint<sup>2</sup>. This infectious disease presents with fever along with severe joint pain and tenderness. Other symptoms include muscle pain, joint swelling, headache, nausea, fatigue and rashes. In Ayurveda, *Sandhiga Sannipata Jvara* mentioned by Bhavaprakasha can be correlated to it.

### **Epidemiology in India**

In India a major epidemic of Chikungunya fever was reported during the last millennium viz.; 1963(Kolkata), 1965(Pondicherry and Chennai in Tamil Nadu, Rajahmundry, Vishakapatnam and Kakinada in Andhra Pradesh, Sagar in Madhya Pradesh and Nagpur in Maharashtra) and 1973 (Barsi in Maharashtra). Thereafter, sporadic cases also continued to be recorded especially in Maharashtra state during

1983 and 2000. In the year 2005 and 2006, there has been a huge outbreak of Chikungunya in India. The states affected by the Chikungunya were Andhra Pradesh, Karnataka, Maharashtra, Tamil Nadu, Kerala, Goa, Pondicherry, Madhya Pradesh, Gujarat, Rajasthan, Andaman & Nicobar, and GNCT of Delhi<sup>3</sup>. As in previous years, India suffered with 62000 cases<sup>4</sup>.

### **Sign and Symptoms<sup>5</sup>**

Chikungunya infection is characterized by an intense joint pain of abrupt onset, high fever, and rashes. The joint pain is often very debilitating, which can limit even the simplest daily activities. It usually lasts for a few days, but may be prolonged for weeks, months or even years. Other common signs and symptoms include muscle pain, joint swelling, headache, nausea and fatigue. Occasional cases of ophthalmological, neurological and heart complications and gastrointestinal complaints have been reported with chikungunya virus infections.

### **Diagnosis<sup>6</sup>**

The laboratory diagnosis of chikungunya infection is based on viral isolation, viral RNA identification through molecular

techniques, such as reverse transcription (RT) and real-time PCR and the detection of IgM and IgG antibodies through serological tests using enzyme linked immunosorbent assays (ELISA) and/or rapid immune chromatographic tests.

**Ayurvedic approach to Chikungunya**

In Ayurveda, *Sandhiga Sannipata Jvara* explained in Bhavaprakasha can be correlated to Chikungunya because of the similarities in symptoms like fever, arthralgia, nausea, swelling and tenderness of joints. The symptoms of *Vata-Pitta Jvara*, *Vata-Kapha Jvara* and *Vatolbana sannipata jvara* are similar to the symptoms of Chikungunya fever to some extent.

**Table: 1**

Symptom correlation of Chikungunya with *Lakshana* of *Jvara* mentioned in Ayurveda

Name of text	Type of Jvara	fever	chill	Arthritis /arthralgia	headache	vomiting	fatigue	nausea	sleeplessness
Bh.Pr.Ma <sup>7</sup>	<i>Sandhiga Sannipata Jvara</i>	+	-	+	-	-	-	-	+
Ch.S.Ch <sup>8</sup>	<i>VP</i>	+	-	+	+	+	+	-	+
	<i>VK</i>	+	+	+	+	-	-	-	-
Ch.S.Ch <sup>9</sup>	<i>Vatolbana Sannipata Jvara</i>	+	-	+	+	-	-	-	-
Su.U <sup>10</sup>	<i>VP</i>	+	-	+	+	+	+	-	+
	<i>VK</i>	+	+	+	+	-	-	-	-
AH.Ni <sup>11</sup>	<i>VP</i>	+	-	+	+	+	+	-	+
	<i>VK</i>	-	-	+	+	-	-	-	-
AS.Ni <sup>12</sup>	<i>VP</i>	+	-	+	+	-	-	-	-
	<i>VK</i>	-	-	+	+	-	-	-	-

Ma.Nj <sup>13</sup>	VP	+	-	+	+	+	-	-	+
	VK	+	+	+	+	-	-	-	-

**Ayurvedic management**

There is no specific treatment for Chikungunya. The contemporary modalities of management encompass the use of medication for symptom relief by antipyretics, analgesics, anti-inflammatory agents. Though, these measures help to certain extent during acute pyrexia phase, no satisfactory treatment regimen is available for managing sequel of acute phase. The post pyrexia phase/ post Chikungunya status where there is a severe incapacitating arthritis associated with fatigue needs clinically safe and effective long-term therapy to improve the quality of life. Ayurveda offers a number of single drugs, compound herbal and herbo- mineral combinations, which may be rationally used to combat such conditions. Also, several physical measures for vector control and environmental sanitation like *Dhoopana* with antimicrobial agents (*Rakshoghna dravya*) can also be used effectively.

The Ayurvedic treatment modalities of Chikungunya can be categorized into;

- Symptom modifiers and general health promoters; more specifically to say the drugs which improve the Quality of Life (QOL) and Vector control measures/ agents are beneficial in the management of Chikungunya<sup>14</sup>.

(a.) Symptom modifiers:

The agents that alleviate symptoms are categorized under symptom modifiers such as-

1. *Jvarahara* (anti pyretics)
2. *Shothahara* (anti -inflammatory)
3. *Vedanaahara* (analgesics)
4. *Kushtghna* (Skin diseases)
5. *Kandughna* (anti- pruritic)
6. *Kasahara* (anti -tussive)
7. *Swasahara* (anti -dyspnoeic)
8. *Atisarahara* (anti-diarrhoeal)

(b). General Health Promoting agents

The agent that improve Quality Of Life (QOL), provides strength or resistance against the disease and also facilitate early recovery are classified under General Health Promoters such as

1. *Balya* (Tonic)

2. *Rasayana*(Immunomodulator)

(c). Vector control measures/agents

Vector control measures are mostly physical measures for environmental cleanliness.

1. *Dhoopana* (for Fumigation)
2. *Bhuthaghna&Rakshoghna* (Anti-microbial agents)

Here, Symptom modifiers are taken as curative in phase I & phase II, General health promoters and Vector control measures as Preventive measures.

**Curative phase I:**

Following medicines are given

1. *Amruthotharam Kashaya*<sup>15</sup>

It does *Amapachana*, cures *jvara* caused by all Dosha. *Nashayeth akhila doshaja jvara*- has got properties like; anti-arthritic, anti-gout, anti-inflammatory, anti-pyretic, antioxidant, antiviral, antibacterial, carminative, digestive stimulant, immunomodulator and mild laxative.

2. *Vettumaran Gulika*<sup>16</sup>

*Jvarahara*(Anti-pyretic), *Pachana* (carminative), *Deepana* (digestive stimulant)

3. *Sadanga paneeyam*<sup>17</sup>

It does *Ama Pachana* and cure *Trishna* and *jvara*

**Curative phase II**

1. *Rasna erandadi Kashaya*<sup>18</sup>

It is effective in *Vatavyadhi* associated with *Shula* (Pain) and *Vatarakta* associated with *Shopha* (*Swelling*). These properties effectively cures the post chikungunya arthritis.

2. *Chandraprabha Vat*<sup>19</sup>

It is *Sarva roga prashamini* i.e it cures all the diseases. It can cure the Post Chikungunya status because of its action like *Shulahara*, *Kasahara*, *Shwasahara*, *Tridosahara*. It also acts on *Mandagni* and *Aruchi*. It is *Balya* and *Rasayana*.

3. *Jatamayadi churna*<sup>20</sup>

It is indicated in *Vatarakta* associated with *Daha*, *Ruja* and *Shopha*

**General Health promoters**

*Aswagandha*, *Amalaki*, *Guduchi*, *Yastimadhu* belong to this category.

Because of their *Rasayana* property, they improve health.

**Preventive measures**

- Aparajithadhuma churna*<sup>21</sup>

It contains *Vacha*, *Mayurashika*, *Rala*, *Nimbatwak*, *Arka*, *Guggulu*, *Useera*, *Sallaki*, *Karpoora*. All these drugs are effective in vector control and it is indicated for *Sarva Jvara* as *Dhoopana*.

## Diet and Life style adoption

### **Ahara(Diet):**

1. Always have home made fresh food, plenty of lukewarm liquids, light and warm diet, Liberally use ginger and turmeric in foods.

2. Always avoid food prepared under unhygienic conditions, contaminated and stale food, Cold drinks, beverage etc,

### **Vihara (Life style):**

1. Avoid visiting the disease prevalent areas

2. Proper sanitation measures to be followed

## **CONCLUSION**

Chikungunya outbreak has caused considerable discomfort and morbidity to certain extent among the affected population. The current treatment measures help to certain extent during acute pyrexia phase while no satisfactory treatment regimen is available for managing sequel of acute phase. The post pyrexia phase / post chikungunya status where there is severe debilitating arthritis associated with fatigue needs clinically safe and effective long term therapy to improve

the quality of life. Ayurveda offers a number of single drugs, compound herbal and herbo mineral combinations, which may be rationally used to combat such conditions. *Rasna erandadi Kashaya, Chandraprabha vati* etc have been proven to give good results in this condition. Besides these, several physical measures for vector control and environmental sanitation like *Dhoopanawith* antimicrobial agents like *Aparajitha dhuma* are also mentioned in Ayurveda which are proved to be effective.

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