Chikungunya: Is there any alternative?

Dr. B. Srinivas Kakkilaya

During the recent epidemic of Chikungunya in Dakshina Kannada District, the Dept. of Health organised camps in every village to distribute homeopathy drugs, apparently to prevent the spread of the infection. To know the scientific basis for this, information was sought form the District Health Officer and the State Health and Family Welfare Dept., under the provisions of the Right to Information Act, 2005. While the District Health Officer denied having any knowledge of such camps, the state Health and Family Welfare directorate, on the other, revealed that the DHO had sought grants to the tune of Rs. 8 lakhs for conducting integrated medical camps and distributing homeopathy and ayurveda drugs in the affected areas and that the state govt. had released funds of Rs. 7 lakhs. Although the H&FW dept. also claimed that there is evidence available to support the use of homeopathy drugs in the prevention of Chikungunya, the studies appear too naïve and inconclusive. Therefore, the decision of the H&FW dept. to distribute homeopathy drugs to lakhs of people raises a lot of questions.

It is often rare to find ourselves prepared to tackle emergencies and so it is only natural that things get badly messed up in such situations of crisis. And it is also not rare to find many waiting to fish in the troubled waters. Recently we witnessed all these happening during the outbreak of chikungunya epidemic in Dakshina Kannada district of Karnataka state. The officials of the dept. of health and family welfare, as always bereft of ideas or plans to tackle the epidemic, readily washed off their hands claiming that modern medicine does not offer any treatment for chikungunya. Further, it was claimed that homeopathy and ayurveda have remedies to offer not only provide for treatment but also for prevention of chikungunya and many camps were organized in the Primary Health Centres, Anganwadis etc. for the free distribution of homeopathy drugs for the ‘prevention’ of chikungunya. The Govt. of Karnataka issued a front page advertisement in all the dailies on June 13, 2008 detailing the steps taken by the government in tackling the epidemic. Among other things, the ad claimed that ‘chikungunya is a self-limiting disease that resolves in 8—10 days’ and that ‘it was not fatal’, but went onto to claim that the government had ensured adequate supplies of ‘life saving drugs and other medicines needed’ for the treatment of chikungunya. It also claimed that ‘homeopathy and ayurveda drugs are useful in preventing chikungunya’ and that ‘people can use these drugs’ to prevent the infection. Contrary to what is well known, the district health officer claimed that the incidence of chikungunya would drop following the rains! Meanwhile, thousands suffered from the infection across the district. Many doctors, who had never seen such cases in the past, were unclear about the management of the infection and some practitioners of alternative systems of medicine posed as experts of chikungunya and wrote reams on the virtues of alternative therapy in the management of this disease. While many doctors and hospitals rendered selfless service, stretching all their limits, some original, many alternative and most quacks hiked their fees and rendered ‘special’ service. The media reported the events ‘as they where’ and provided lots of space for the ‘experts from alternative medicine’ and all this only helped to worsen the confusion.

We wrote to the District Health Office and the state Health and family Welfare department seeking information under the Right to Information Act, 2005 regarding the reasons and supporting evidence for organising the camps distributing homeopathy tablets to prevent chikungunya. The answers clearly reflect how the administration responds to such epidemics and how the public health administration irrationally surrenders itself to the ‘alternative medical systems’ when the specialists from modern medicine are found wanting in formulating a scientific and rational strategy to tackle the epidemic. (The full text of the questions and answers are provided elsewhere)

Chikungunya and Modern Medicine:

It has been widely reported in the media that modern medicine has nothing much to offer in the treatment of chikungunya. Combined with reports that there were deaths due to chikungunya (it is another thing that none of these deaths were ever confirmed as due to chikungunya), such statements only increased confusion and panic among the people. This provided a golden opportunity for the proponents of the ‘alternative systems’ to claim the void and make the most of it.

But what are the facts?[1-5]

Every attempt has been made to study chikungunya since its identification as a mosquito borne illness in 1952. The ultra structure of the virus, its modes of spread, symptoms, complications, manifestations in infected pregnant women, infants and the elderly, morbidity and mortality, chronic arthritis and its management strategies and many other aspects of chikungunya have been studied in detail in several
countries and the reports have been published in many reputed scientific publications and by WHO.

In the recent years, chikungunya has been spreading across 23 countries of Africa and Asia, including India. The changes in the viral genome have apparently made it more virulent and the same viral serotype has been found across Africa and Asia. The disease is self-limiting and in most patients resolves in 4-10 days. There is no need for any specific treatment for chikungunya other than acetaminophen in case of high fever or severe joint pain. Rare complications may require specific supportive treatment. About 12% patients may have persistent joint pains and such patients may need chloroquine tablets. There are no drugs or vaccines to prevent chikungunya and the spread of infection can be prevented only by means of controlling the vector mosquito.

Thus, modern medicine is clear about the strategies for management and prevention of chikungunya. More research is underway to understand its pathogenesis and to develop a vaccine.

Is there any specific treatment available for chikungunya in the ‘alternative systems’ of medicine?

The answer is a big NO. The fact is, none of the ‘alternative systems’ of medicine even consider chikungunya as a separate disease entity. Most of the so called ‘alternative systems’ consider the various diseases that afflict humans as manifestations of imbalance between man’s internal and/or external environs and the concept of single causes like infectious agents does not exist in these systems. That being the case, these systems offer ‘treatment’ based largely on the symptoms alone, (fever, jaundice, joint pain etc.,) whatever be the cause.[See below] But ironically, while writing on chikungunya, most of these ‘experts’ of alternative medicine have not hesitated even a bit in ‘copy-pasting’ the details of chikungunya, including the fact that it is a viral illness, from various resources of modern medicine!

All these ‘alternative systems’ suggest piece meal treatment for the various manifestations of chikungunya and nowhere one finds a holistic or complete treatment. [6-13] The word chikungunya is nowhere to be found in the Boericke’s Homeopathic Materia Medica, often cited in the articles on the treatment of chikungunya written by homoeopathic ‘experts’. [6,7,14] It is hard to find any studies on the efficacy of such alternative medicines in the treatment of chikungunya in any peer reviewed literature. Even the two studies, cited by the Karnataka Health and Family welfare department as evidence for the efficacy of homeopathy in the management of chikungunya, have not been published so far.[15-17] Therefore, there is no evidence or support to substantiate the claims of the ‘experts’ of the alternative systems that these systems provide specific and effective treatment for chikungunya, while modern medicine has nothing to offer.

What are the alternative treatments for chikungunya?

Many types of ‘drugs’ have been suggested for the treatment of chikungunya in homeopathy, ayurveda, unani and Siddha systems.

Homeopathy is based on the principle of like cure the like, wherein a symptom is treated by the administration of minute concentrations (so miniscule, the pill may not have anything in it at all!) of a compound that causes the same symptom.[18] On that basis, many drugs have been suggested for the treatment of chikungunya[6,8-11,16,17,20] Eupatorium for body ache, china for severe aches and pains, pyrogen for rising temperature, arsenic for anxiety or restlessness due to fever, nux vomica for vomiting or pain with irritation, gelsemium for head ache, rhus tox for rashes and joint pains, arnica for redness, belladonna for high fevers when face looks flushed or pain with violence, bryonia for pounding pulse or pain with tranquility, coffea for pain paroxysms and excitability, chamomilla for pain with anger, ignatia for pain with weeping, aurum for pain with depression and other drugs like ledum pal, ruta graveolens, apis and formica rufa etc., have been suggested in homeopathy. While the basis for classifying the symptoms of chikungunya (or any other illness for that matter) are not clear and not supported by any evidence in any of the homeopathy literature, this gives us some idea on how a particular disease is analysed and understood and how the treatment of any disease is decided in homeopathic practice. This also makes it very clear, contrary to all the claims of the experts, that homeopathy has no specific treatment to offer for chikungunya.

Let us now examine the three documents provided by the Karnataka Health and Family Welfare Directorate, (H&FWD) in reply to our queries under the RTI, to support the claim that homeopathy is indeed effective in the treatment of chikungunya.[16,17,20] [These documents appeared like copies of some audio-visual presentations and we had to search for the detailed papers on the Internet] It appears that the two studies [16,17] cited by the state H&FWD have neither been peer reviewed nor published in any journals. [According to the author, the article (17) has been submitted to Br Homeo Journal and is still under review] One wonders how the H&FWD can make major decisions that involve lakhs of people and lots of money based on such unpublished data.

In the Pilot Study on Treatment of Chikungunya conducted in Kerala by Biju SG and Sarathchandran, nine drugs [ledum pal, ruta graveolens, rhus tox, belladonna, eupatorium, bryonia, apis, formica rufa and arsenic] have been used. But in a letter written to the H&FW directorate, the Karnataka region Director of Ayush, [the project of integrated alternative medical
systems promoted by the Union Govt.,] recommends four drugs, namely rhus tox, belladonna, ledum pal or bryonia, for chikungunya in Karnataka.[20] Chikungunya in Kerala needs nine drugs, while four would do in Karnataka! But this significant difference (!) between the two states does not stop the state H&FW directorate from citing the study done in Kerala as evidence for the efficacy of homeopathy drugs in treating chikungunya in Karnataka! Given this difference, how is it that the officials do not find the need to conduct separate studies in Karnataka?

The Director of Ayush further states that the symptoms would subside in 70-80% of patients within 5 days. [Although he has quoted the Principal of Bangalore Homeopathy Medical College and the first grade physician’s report as the support for this claim, no such documents have been provided and no such study appears to have been conducted] On the other, does the study conducted in Kerala state reveal any benefits? The pilot study of Biju SG and Sarathchandran [16] included 532 patients of chikungunya. Among them, 16% patients had some relief in 3 days, 43% in 7 days, 28% in 14 days and 3% in 30 days and about 24 different symptoms improved to an extent of 11-87%. [That means, no patient had total relief from all the symptoms] In addition, the symptoms that persisted after the subsidence of fever improved to an extent of 8-50% (average 30%) only. But this pattern of recovery fits very well with the natural remission of the disease, without much treatment. The benefits of administering homeopathy drugs (nine of them!) to chikungunya patients are therefore not clear from this study.

Hahnemann in aphorisms 272-274 of ‘Organon of Medicine’ states that only one single, simple medicinal substance is to be administered in a given case, because, the ingredients may even result in interactions that may have adverse effects in the body. [18] But in the pilot study, nine drugs were used for a week (or more) and the report does not make any mention of any efforts having been made to look for any adverse effects of these drugs.[16] It is therefore shocking, to say the least, that even with all these short comings and insignificant results, the authors have no hesitation to claim that ‘homeopathy medicines are highly effective in the management of chikungunya cases’[16] and that the state H&FW directorate quotes such a study as evidence to support the distribution of homeopathy drugs to the public at taxpayers’ expense!

Considering the fact that homeopaths have a unique way of classifying symptoms and treating, it is worthwhile to probe further. As homeopaths decide on the treatment based on the constellation of different symptoms in a given individual in a given locality, the treatment would be similar for similar symptoms, whatever the cause may be. Therefore, all diseases that cause fever, joint pains and other symptoms commonly seen in chikungunya may be given a similar treatment, as long as the symptoms remain similar. And that is true. Four of the drugs used in the treatment of chikungunya are also used in the treatment of dengue, five in malaria and one in tuberculosis! [Table 1][12,21-23]

Table 1: Homeopathy drugs for various ‘fevers’:

<table>
<thead>
<tr>
<th>Drug</th>
<th>Chikungunya</th>
<th>Dengue</th>
<th>Malaria</th>
<th>TB</th>
</tr>
</thead>
<tbody>
<tr>
<td>Eupatorium</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Pyrogen</td>
<td>✓</td>
<td>✓</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Arsenicum</td>
<td>✓</td>
<td></td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>China</td>
<td>✓</td>
<td></td>
<td></td>
<td>✓</td>
</tr>
<tr>
<td>Nux vomica</td>
<td>✓</td>
<td></td>
<td></td>
<td>✓</td>
</tr>
<tr>
<td>Gelsimium</td>
<td>✓</td>
<td></td>
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<td>✓</td>
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<tr>
<td>Rhus</td>
<td></td>
<td>✓</td>
<td></td>
<td></td>
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<tr>
<td>Arnica</td>
<td></td>
<td>✓</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Belladona</td>
<td>✓</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bryonia</td>
<td></td>
<td>✓</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

It is indeed unique that homeopathy offers the same treatment for viral diseases like chikungunya and dengue and a parasitic disease like malaria! Although chikungunya and dengue, being viral, may be self-limiting and non-fatal, what would be the fate of those patients who suffer from malaria, a potentially fatal illness?

Other alternative systems of medicine like Ayurveda, Unani and Siddha, also offer symptomatic treatment for chikungunya. Ayurveda, and to a large extent Unani and Siddha, are based on the concept of five bhootas, seven dhatus and three doshas. [24-27] There is no scope for a viral aetiology in disease causation in these systems of medicine as well.

As per the recommendations of the Principal of Ayurveda Medical College, Bangalore, early treatment of chikungunya with Amritadi guggulu and Rasana eranda kwata choorma will provide relief in 3 days.[20] Vilavadi and Sudarshana tablets have also been suggested.[12] However, there are no studies to support these claims.

According to Unani, majoon-e-suranjan, hapa-e-suranjan, rogan-e-surk, habe-e-askand, safoofa-e-tabbashir (costing Rs. 200 per patient) would provide relief to 50% of the patients within a week and another 25% patients would improve in 1-2 weeks.[Based on the recommendation of the Principal, Unani Medical College, Bangalore and the experience with 200 patients who attended the out patient dept. of Unani Medical College][20] As mentioned above, the pattern of recovery is similar to the natural history of the illness!

Siddha system recommends the following for the symptomatic treatment of chikungunya: Nilavembu Kudineer (for fever), Vathahura Kudineer(for joint pain and swelling), Santha Chandrodaya Mathirai, Balasanjeevi Mathirai, Brahmananda Bhairava Mathirai, Ashta Bhairava Mathirai and Vasantha Kusumaraga Mathirai.[13] Further details or studies to support these claims are not available.
Considering all these, it can be safely said that none of the alternative systems of medicine have any specific or proven treatment to offer for chikungunya. The remission of symptoms among the patients treated with the alternative medicines follows the pattern of natural remission of the disease in the absence of any specific treatment and therefore as of now, there is no evidence to show that alternative medicines either hasten the recovery, prevent complications or lasting symptoms or change the course of the disease in any significant manner.

**Can Chikungunya be prevented by ‘alternative medicines’?**

As the unsupported claims of specific treatment for chikungunya available in ‘alternative systems’ went unchallenged, the ‘experts’ of alternative medicine got emboldened to further claim that the spread of chikungunya could be prevented by the use of alternative medicines. Absence of an effective vaccine and the panic and confusion among the officials of the health dept. in the face of the rapidly spreading infection provided a golden opportunity for the alternative systems to not only make such tall claims, but also to conduct camps in many areas to distribute the ‘alternative drugs’ to lakhs of people at the expense of the exchequer.

What about the evidence? According to the experts of homeopathy, drugs that are used in the treatment of chikungunya are also useful in preventing the infection – no difference whatsoever in the drugs administered to those who already suffered and the general public yet to be infected! This looks simple and easy, even though it defies all logic! [Table 2]

**Table 2: Homeopathy drugs for the treatment and prevention of chikungunya**

<table>
<thead>
<tr>
<th>Drug</th>
<th>Treatment</th>
<th>Prevention</th>
</tr>
</thead>
<tbody>
<tr>
<td>Eupatorium</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Pyrogen</td>
<td>✓</td>
<td></td>
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<td>Rhus</td>
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<tr>
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</tr>
<tr>
<td>Belladona</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Bryonia</td>
<td>✓</td>
<td>✓</td>
</tr>
</tbody>
</table>

But no, there is some twist to the tale. Even though chikungunya is caused by the same virus everywhere (this fact of modern medicine, of course, is not accepted by homeopathy?!), the drugs to prevent its spread has to be different from place to place and the suitability of a particular drug has to be decided only by an ‘expert’ of homeopathy after considering the local conditions. According to the Central Council for Research in Homoeopathy (CCRH), established by Govt. of India, the following drugs are useful in preventing chikungunya in different parts of India: Bryonia for Kottayam in Kerala, Eupatorium for Calicut in Kerala and Hyderabad in Andhrapradesh, rhus tox for Rajasthan and Karnataka, Ledum pal and Chamomilla for Chennai in Tamilnadu.[28] (Rajasthan in north western India and Karnataka in south western India at last have something in common!) On the other, the Director of Ayush for Karnataka, in his letter to the dept. of H&FW, recommends rhus tox, ledum pal and tuberculinum for prevention of chikungunya in Karnataka, while at the same time informing that the results of the studies in this regard are as yet awaited. [20] But the state H&FW directorate goes on to cite a study conducted in Trivandrum, using Eupatorium, as evidence to support the use of homeopathic drugs in Karnataka![29]. How can a study, using Eupatorium and done in Trivandrum, support the use of Rhus tox, Ledum pal and tuberculinum in Karnataka? If it is true that different drugs have to be used in different places, is it not necessary to study the efficacy of thee drugs separately? How can major public health policies, that involve considerable expenditure, be decided How is it that the officials and medical professionals of the H&FW dept., decide to distribute drugs to lakhs of people at considerable expense to the exchequer, without seeking any scientific evidence to support such an action?

But is the study done at Trivandrum reliable?[17,29] Although the authors claim that the study was conducted to assess the efficacy of homeopathy drugs in the prophylaxis of chikungunya, the only outcome that was studied in the treated population of only fever and not the manifestations of chikungunya. No explanation is found in the report to the fact that 376 of the 2000 subjects included in the study were later excluded. Also, there is no mention of any adverse effects of the drugs having been studied. The homeopaths may be for sure (and forever) believe that the drugs may not have any adverse effects and accordingly might not have found it necessary to study any possible adverse effects in the study population; but the same cannot be said of the officials of the H&FW dept., who are responsible for the drugs that they distribute to lakhs of people. This study claims that the homeopathy drugs were effective in preventing fever in the study population, but the fact remains that the attack rate of chikungunya varies widely from 4-45% [30] and drawing such sweeping conclusions on the basis of such a not-so-well-designed study is unjustified.

**Conclusion:**

In conclusion, the information provided by the H&FWD in response to our query seeking the scientific evidence to support the claim that ‘alternative systems’ of medicine provide drugs that
are effective in the treatment and prevention of chikungunya raises more questions than answers.
1. All scientific studies regarding the various aspects of chikungunya have been conducted only by the scientists of modern medicine and such studies are continuing, including the research on development of a vaccine.
2. Chikungunya is a self-limiting, non-fatal viral illness that resolves in 4-10 days. Simple, almost harmless drugs are available in modern medicine to treat the symptoms such as high fever or severe joint pains.
3. There are no specific or special treatment available in any alternative systems of medicine for treating chikungunya and no research in this regard has been published in any scientific publication of repute so far. All alternative systems only suggest drugs for the various symptoms of chikungunya and no studies have been published on the efficacy or adverse effects of such drugs.
4. No evidence that supports the efficacy of homeopathy or any other alternative systems in preventing the spread of chikungunya are available either with the state H&FWD or the Internet or in any scientific literature.
5. Therefore, there is no evidence to support the claim that the ‘alternative systems’ provide better treatment for chikungunya than modern medicine.

References:
7. Thomas M. Chikungunya and Homeopathy. Available at http://www.medindia.net/alternativemedicine/homeopathy/Chikungunya_References.htm
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29. Rejikumar R, Dinesh RS et al. A Study On The Prophylactic Efficacy Of Homoeopathic Preventive Medicine Against Chikungunya Fever. Found in the copy of the presentation provided by the Karnataka Health and Family Welfare Directorate. [Copy with the author]
Annexure: Information obtained from the Health and Family Welfare Department under the provisions of the Right to Information Act, 2005

Annexure 1: Information provided by the District health Officer, Dakshina Kannada. (NVBDCP/NAA/17/08-09)

1. What are the areas affected by chikungunya and what is the population?

Ans.: Up to 8-7-2008, among the 14,55,883 people in the 343 villages, there have been 75093 cases of fever and 30280 suspected cases of chikungunya.

2. Have the drugs preventing chikungunya been distributed in the affected areas, if yes, what are those drugs and what is the dosage?

Ans: No drugs have been distributed.

3. How many people have been given the drugs to prevent chikungunya?

Ans: Not given.

4. Have there been any studies on the efficacy and adverse effects of such drugs? If yes, provide copies of such reports/published papers.

Ans: No information is available at this office

5. What is the amount that has been spent on the procurement of such drugs? From where and when have such drugs been procured; provide the copies of the relevant documents.

Ans: No such drugs have been procured.

6. What is the policy of the National Vector Borne Disease Control Programme on the use of drugs to prevent chikungunya? Has any permission been obtained from NVBDCP for the distribution of drugs to prevent chikungunya in Dakshina Kannada? Provide copies of the communication in this regard.

Ans: No information is available at this office

[Comments: It appears that the District Health Officer is ignorant about the distribution of drugs to prevent chikungunya. In that case, who organized the camps at the Primary Health Centres in almost all the villages? Where did the drugs come from?]

Annexure 2:

An advertisement published by the state govt. gave enough indications of the confusion prevailing in the Health and Family welfare dept., about tackling chikungunya. So, information was sought from there too.

To,
The Information Officer
Health and Family Welfare Dept.,
Bangalore

Sir,

Sub: Chikungunya infection and its prevention – information sought under the RTI, 2005 reg.

The Govt. of Karnataka has published an advertisement on the front page of Prajavani Daily dated June 13, 2008 regarding the spread of chikungunya infection and the various measures initiated by the govt. While on the one hand it claims that chikungunya is a non-fatal, self-limiting infection that lasts 8-10 days, on the other it mentions that ‘measures have been taken to supply life saving drugs and provide all necessary treatment on a war footing’. It also claims that ayurveda and homeopathy drugs are effective in the prevention of chikungunya and that the people can use such drugs. In this regard, please provide the following information as per the provisions of the Right to Information Act, 2005.

1. If chikungunya is non-fatal, where is the need for life saving drugs?

Ans: The booklet published by WHO provides answers to the FAQs on chikungunya and a copy of the same is attached herewith.

[Comment: This document is available on the web at http://www.whoindia.org/LinkFiles/Chikungunya_Fever_bds-chikungunya-faqs.pdf]

According to that, even though chikungunya is non-fatal, it can lead to complications in pregnancy, immunocompromised, patients suffering from incurable diseases and the elderly (high risk group) and therefore, life saving drugs are necessary.

Life saving drugs are also needed because dengue, also spread by Aedes mosquitoes like chikungunya, can cause fatal complications.

What are the life saving drugs that have been supplied? Provide the details of the quantity and expenditure involved in supplying such drugs to the various districts.

Ans: Ringer’s lactate, dextrose 5% with sodium chloride, dextrose 5%, sodium chloride 0.9% etc.

Details are given in the Table below:
<table>
<thead>
<tr>
<th>General drugs</th>
<th>Quantity</th>
<th>Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Paracetamol tablets</td>
<td>14751200</td>
<td>3605193.28</td>
</tr>
<tr>
<td>Diclofenac tablets</td>
<td>7674200</td>
<td>1596233.60</td>
</tr>
<tr>
<td>Paracetamol injection</td>
<td>77230</td>
<td>106268.43</td>
</tr>
<tr>
<td>Diclofenac injection</td>
<td>337716</td>
<td>1053673.92</td>
</tr>
<tr>
<td>Ranitidine tablets</td>
<td>772130</td>
<td>305145.78</td>
</tr>
<tr>
<td>Ranitidine injection</td>
<td>252144</td>
<td>655574.40</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Life saving drugs</th>
<th>Quantity</th>
<th>Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dexamethasone injection</td>
<td>41210</td>
<td>88944.00</td>
</tr>
<tr>
<td>Dextrose 5% with sodium chloride</td>
<td>113460</td>
<td>1108504.20</td>
</tr>
<tr>
<td>Dextrose 5%</td>
<td>147661</td>
<td>879886.68</td>
</tr>
<tr>
<td>Sodium chloride 0.9%</td>
<td>115356</td>
<td>1072464.74</td>
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<tr>
<td>Ringer’s lactate</td>
<td>191419</td>
<td>1870163.63</td>
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<tr>
<td>Metronidazole injection</td>
<td>6512</td>
<td>38403.30</td>
</tr>
<tr>
<td>Dopamine injection</td>
<td>4495</td>
<td>66755.25</td>
</tr>
</tbody>
</table>

Comments: Dexamethasone is a steroid and its use is contraindicated in chikungunya and dengue fevers. This fact is very clearly mentioned even in the WHO document cited above. Why then was it supplied? The rationale for supplying Metronidazole, a drug used in the treatment of amebiasis and anerobic infections, is also not clear.

2. What is the recommended treatment for chikungunya?
Ans: There is no specific treatment to cure chikungunya. However, it is treated symptomatically with antipyretics and analgesics like paracetamol, diclofenac sodium and chloroquine. These drugs provide symptomatic relief to the patient. In the event of dehydration, adequate fluid balance should be ensured based on the weight of the patient and there is an increased need for the life saving fluids.

Provide the details of the quantity of the drugs supplied and the expenditure thereof.

<table>
<thead>
<tr>
<th>System</th>
<th>Treatment</th>
<th>Cost</th>
<th>Effectiveness</th>
<th>Remarks</th>
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</table>
| Ayurveda | 1. Amruthadi guggulu (1gm tds)  
2. Rasna eranda kvatha churna (15ml tds)  
3. Vana thulasi patra & bevu enne | Rs. 5 per adult (half for children)  
For fogging (Rs. 5 per day per household) daily | Patient will recover within three days in early stages | As per the report submitted by the Principal, GMAC, Bangalore |
| Unani | Majoon-e-suranjan (8gm tds) or Hap-e-suranjan (500mgm 2 tds)  
2. Rogan-e-surkh (external application) daily once  
3. Habe-e-asgnad (500mgm tds)  
4. Sfoof-e-tabasheer (500mg tds) | Rs. 200 per patient | 50% of acute cases are relieved within one week, another 25% need another 1-2 weeks to recover | As per the report from the Principal, GUMC, Bangalore (represented by Dr Fayaz Ahmed Sharief, Asst. Prof) (About 200 cases seen in camps and college OPD) |
| Homeopathy | Acute cases | Rs. 01 per patient | 70-80% relief in five days | As per the report submitted by the Principal and Physician Grade 1 of GHMC, Bangalore |
| For prevention | Rhus tox tid or ledum pal qid or Belladona qid or Bryonia qid (all 200)  
| Rhus tox 200 BD and Ledum Pal 200 BD for 7 days & tuberculinum IM (one dose)  
Note: Medicines to be taken ½ hour before or after taking anything else orally | Rs. 01 per patient | Results awaited | |
Also enclosed with the reply is a copy of a letter dated 30-6-08, typed on plain paper without the name and designation of the signatory, that provides details of the measures taken by the Ayush department with regard to chikungunya. As per this letter, as on date, Ayurveda drugs worth Rs. 10,89,510, Homeopathy drugs worth Rs. 3,45,025 had been purchased and the process of purchase of unani drugs was in its final stages. In addition, the Zilla panchayaths of Kolar and Hassan had purchased Homeopathy drugs worth Rs. 75000 and Rs. 100000 respectively and the zilla panchayath of Bellary had purchased Ayush drugs worth Rs. 75000.

Has there been any research in this regard?
Ans: Yes

Provide the copies of the reports of such studies
Ans: Enclosed

[Comment: These documents appeared like copies of some audio-visual presentations and on the basis of the titles and authors, we obtained the detailed papers from the Internet]

4. The web site of the National Vector Borne Disease Control Programme clearly states that there are no medicines available to prevent chikungunya. (http://nvbdcp.gov.in/Chikun-Status.html) That being the case, whether the issue of the use of homeopathy and ayurveda drugs for prevention of chikungunya has been discussed with the officials of NVBDCP and necessary permissions obtained from them for such use?

Ans: This issue has been discussed many a times with the officials of the Govt. of India. The issue was discussed on many occasions with Dr. Kalpana Barua, Deputy Director, NVBDCP Directorate, Delhi and also at the joint meetings of the officials of Karnataka, Kerala and Tamilnadu states. It is not necessary to seek the permission of the NVBDCP Directorate for the use of Homeopathy and Ayurveda drugs.

If yes, provide the copies of correspondence
Ans: Information provided by the Director, Ayush is enclosed

5. Who has advised the state govt. on the use of life saving drugs in the treatment of chikungunya and the use of homeopathy and ayurveda drugs for the prevention of chikungunya?

Ans: The Commissioner of Health and Family Welfare Department has instructed the Director, Ayush Programme.

[Comment: Sri Basavaraju, Commissioner of Health and Family Welfare Department, in his letter NVBDCP/ENT/10/08-09 dated 2.5.08, has suggested to Dr. Prakash to provide homeopathy drugs to the patients free of cost.]

Provide the copies of the correspondence, reports and minutes of the meetings in this regard
Ans: Copy of the above mentioned letter is enclosed.

The information also includes a letter written by the District Health Officer, Dakshina Kannada, dated 15-5-2008 and addressed to the Chief Accounts Officer of the H&FW Directorate (DHFW/CMD/27/2008-09) informing him of the need to organize integrated medical camps for the control of chikungunya and the need to for arrange homeopathy and ayurveda medicines. The letter seeks grants to the tune of Rs. 800000 (Rs. 200000 for arranging the camps over a period of one month, Rs. 300000 for arranging vehicles and Rs. 300000 for procuring drugs). And the state H&FW Directorate has released a grant of Rs. 700000 on 20-5-2008 (No BJ7/12/2008-09)