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# CASE STUDY

# TO EVALUATE THE EFFICACY OF A HOMOEOPATHIC COMBINATION REMEDY IN TREATING DENGUE FEVER

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#### Abstract

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Key Word- Homoeopathic combination remedy, Dengue fever, Platelet, White blood cell

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Aim: То efficacy evaluate the of a homoeopathic combination remedy in treating dengue fever Material and methods: All patients provided signed informed consent. comprised in the study were 60 patients, consisting of 45 men and 15 females, who were over the age of 20 and had signs of Group A received a homoeopathic combination dengue. medicine, whereas Group B was treated with normal maintenance therapy according to the criteria set by the World Health Organisation. A comprehensive blood analysis, which cell count, included platelet count. white blood and hematocrit profile, was performed every 24 hours for a duration of 6 days utilising the Sysmex KX-21 automated haematology analyzer. The administration **Results:** of homoeopathic combination treatment on the first day, the average platelet count, white blood cell count, and hematocrit values were 96.85x 103  $\pm 2.85$ , 7.85 x 103/µL  $\pm$  1.52, and

47.99%  $\pm$  2.36, respectively. In contrast, for standard maintenance therapy, the corresponding values were 74.58 x 103  $\pm$  2.74, 5.44 x 103/µL  $\pm$  1.05, and 43.11%  $\pm$  2.59, respectively. After 6 days of receiving a combination of homoeopathic treatment and standard maintenance therapy, the average platelet count, white blood cell count, and hematocrit were measured to be 321.58 x 103, 9.17 x 103/µL, and 41.22%, respectively. In comparison, for those receiving only standard maintenance therapy, the values were 241.51 x 103, 8.11 x 103/µL, and 38.22%, respectively.

**Conclusion:** The homoeopathic formulation demonstrated superior treatment efficacy for Dengue compared to the usual maintenance medication advised by the World Health Organisation (WHO). Therefore, the homoeopathic cure has the potential to be a useful weapon against this potentially fatal illness.

#### **INTRODUCTION**

Dengue is prevalent in over 110 countries. Annually, this virus affects a global population of 50 to 100 million resulting in 500,000 individuals. over hospitalisations and roughly 12,500 to 25,000 fatalities. Between 1960 and 2010, the incidence of dengue rose by a factor of 30. The rise in numbers is attributed to a confluence of factors including urbanisation. population expansion, heightened international mobility, and the

effects of global warming [1]. It is a very intense and severe febrile illness. Fever is accompanied by fatigue, shivering, severe headache, discomfort behind the eyes, and muscle and joint pain. Common symptoms associated with this condition include vomiting, sore throat. and nausea, adenopathy [2]. Petechiae may manifest towards the conclusion of the feverish phase of the sickness or once the body temperature has returned to or dropped below the standard level. These petechiae

may be either dispersed or merged Gastrointestinal together. (GI) haemorrhage is often seen in cases of fever and may manifest as various degrees of severity, including moderate to severe epistaxis, menorrhagia, GI bleeds. and Thrombocytopenia and haemoconcentration consistent are observations in cases of Dengue hemorrhagic fever (DHF) and Dengue shock syndrome (DSS). A platelet count of less than or equal to  $100 \times 103/\mu$ L is often seen during the period of sickness between days 3 and 8 [3]. Allopathic medicine does not have any particular drugs that may effectively treat dengue fever. The increasing size and severity of dengue outbreaks suggest that the virus may have mutated, making it challenging to develop an effective vaccine for the four extant [2]. Patients exhibiting clinical strains fever may be treated with paracetamol and fluid replenishment [4-7].

According World Health to the Organisation (WHO), homoeopathy has been effectively used to prevent and cure several infectious illnesses, such as influenza and diarrhoea. It has also been reported to significantly reduce the symptoms of dengue fever[8-11]. As far as we know, no prior research have assessed the effectiveness of homoeopathy drugs in treating dengue fever by examining their impact on clinical haematological markers.

The research aimed to analyse and establish, using haematological data, if homoeopathic treatments may help reduce the development and severity of the illness or shorten its clinical course.

#### Experimental

#### **Study medication**

The study utilised homoeopathic a treatment consisting of a blend of ten herbal and mineral medicines, namely alba. Rhus Bryonia toxicodendron, Gelsemium sempervirens, Aconitum napellus, Eupatorium perfoliatum, China boliviana, Hamamelis. Citrullus Crotilus Horridus. colocynthis, and phosphorus, all in their pure tincture form. The homoeopathic combination used a 30C potency, indicating that the initial diluted 1:100 tinctures were in а water/alcohol solution thirty times. The procedure included combining one millilitre of the original tincture with a combination of water and alcohol, totaling 99 millilitres. То create the second dilution, 1 ml of the resultant solution was combined with 99 ml of a water/alcohol solution. The dilution procedure was repeated 30 times to get a solution with a potency of 30C. The medications were then amalgamated by extracting 5 ml from each 30 C potency solution into an empty dispensing container, and then used to saturate lactose tablets inside a spinning bottle. The pills were administered orally three times daily. The administration of conventional maintenance medication for symptomatic treatment followed the criteria World Health set by the Organisation (WHO). The severity of symptoms was taken into account, such as the use of paracetamol for persistent fever above 39 C. Dimenhydrinate (Gravinate) was used to alleviate the symptoms of nausea and vomiting. Administration of gastro-protective medications, such as ranitidine, omeprazole, or lansoperazole, provided. The administration was of intravenous 5% dextrose/normal saline solution (D/NSS) was started for fluid replacement treatment. The amount and rate of infusion were regulated based on the patient's vital signs and physical condition.

#### MATERIAL AND METHODS

The research was conducted in compliance with the recommendations set out by the World Health Organisation (WHO). Before commencing, the research study acquired ethical permission from the ethics committee. The research was communicated to all the patients both orally and in written form. All patients provided signed informed consent. comprised in the study were 60 patients, consisting of 45 men and 15 females, who were over the age of 20 and had signs of dengue. These symptoms comprised a persistent fever lasting more than 3 days

with a temperature over 37  $\circ$ C, along with at least two of the following symptoms: headache. retro-orbital discomfort, myalgia, arthralgia, or skin rash. Additionally, all patients had a low platelet count of less than 100 x 103/µL. Patients classified as having dengue shock syndrome were not included. Patients with any concurrent illnesses, whether of brief or extended duration, were also not included.

individuals were categorised into The two cohorts. During the first appointment, the patient's demographic information, including age. sex, and location, was gathered. Additionally, their prior medical history, the date of start and severity of their current symptoms, and their usage of medicines for their current disease were documented using a patient data collecting form. Subsequently, the participants had a comprehensive physical assessment and blood specimens were collected. Group A received a homoeopathic combination medicine, whereas Group B was treated with normal maintenance therapy according to the criteria set by the World Health Organisation [7]. A comprehensive blood analysis, which included platelet blood cell count, white count. and hematocrit profile, was performed every 24 hours for a duration of 6 days utilising the Sysmex KX-21 automated haematology analyzer.

## Statistical analysis

A comparison was made between the mean values of each criterion in both groups. The data were analysed using the Student t-test in SPSS version 20.0. Statistical significance was determined at a p-value of less than 0.05.

#### Results

Table 1 demonstrates that following the administration of homoeopathic combination treatment on the first day, the average platelet count, white blood cell count, and hematocrit values were 96.85x  $10^3 \pm 2.85$ , 7.85 x  $10^3/\mu L \pm 1.52$ , and  $47.99\% \pm 2.36$ , respectively. In contrast, for standard maintenance therapy, the corresponding values were 74.58 x  $10^3 \pm$ 2.74, 5.44 x  $10^3/\mu$ L ± 1.05, and 43.11% ± The 2.59. respectively. first findings indicated that there was notable no disparity in the average platelet count, however there were verv significant

disparities in the white blood cell (WBC) count and hematocrit values (p=0.05, 0.03, and 0.001, respectively). After 6 days of receiving a combination of homoeopathic treatment and standard maintenance therapy, the average platelet count, white blood cell count, and hematocrit were measured to be  $321.58 \times 10^3$ ,  $9.17 \times 10^3$  $10^{3}/\mu L$ . and 41.22%, respectively. In comparison, for those receiving only standard maintenance therapy, the values were 241.51 x 103, 8.11 x  $10^{3}/\mu$ L, and 38.22%, respectively. These results indicate a significant difference between the two therapies, with p-values of 0.01, 0.004, and 0.03, respectively. The platelet and white blood cell counts exhibited a daily rise, whereas the hematocrit count showed a decline. On the 6th day of therapy, there were notable disparities between the two groups in all the measures.

Group	Parameter	Day1	Day 2	Day 3	Day 4	Day 5	Day 6
111	PLT (103/µL)	96.85	78.8	117.28	167.85±3.85	238.85	321.58
Group		±2.85	5±2.55	±8.74		$\pm 8.85$	±25.05
А	WBC	7.85±	7.99±1	8.12±1.	8.34±1.69	8.94±1	9.17±1
	(103/µL)	1.52	.58	39		.66	.27
	HCT (%)	47.99	50.28±	46.88±	45.12±2.97	44.54±	41.22±
		±2.36	4.58	2.71		2.81	2.71

Table 1 laboratory parameter in group A and group B

2	PLT	74.58	64.61±	76.85±	96.85±3.71	165.55	241.51
Group	(103/µL)	±2.74	3.69	3.17		$\pm 8.55$	±12.55
В	WBC	5.44±	5.24±1	6.14±1.	7.52±1.69	7.61±1	8.11±1
	(103/µL)	1.05	.04	25		.47	.63
	HCT (%)	43.11	41.04±	40.85±	37.85±1.89	37.58±	38.22±
		±2.59	1.74	2.58		2.74	2.74

\* Significantly different (p < 0.05); SD = standard deviation

## Discussion

А comprehensive review of literature identified several homoeopathic homoeopathic remedies that have been mentioned for the treatment of symptoms associated with dengue fever. These include Aconitum remedies napellus (Monkshood), Belladonna (Deadly Nightshade), Bryonia alba (Wild Hops), perfoliatum (Thoroughwort), Eupatorium Gelsemium (Yellow Jasmine), and Rhus toxicodendron (Poison ivy) [12]. The formulation used in this homoeopathic research consisted of Bryonia alba, Rhus toxicodendron, Gelsemium sempervirens, Aconitum napellus, Eupatorium perfoliatum, Citrullus colocynthis, China boliviana, Hamamelis, Crotilus horridus, and phosphorus. Its purpose was to reduce the severity of dengue symptoms and avoid hemorrhagic consequences by boosting the blood count. A decrease in the number of platelets to less than 100,000 per mm3 was seen from the 3rd to

6th day of dengue sickness, often occurring before to or at the same time as alterations in hematocrit levels. An increase in haematocrit level suggests the occurrence of plasma leakage, while a decrease in total white blood cell count may be attributed to a decline in the number of neutrophils found towards the conclusion of the feverish phase of the disease. The use of a homoeopathic combination resulted in an elevation in platelet and white blood cell counts, as well as a reduction in hematocrit levels. According to the Central Council of Research in Homoeopathy, India, a study including 23,520 individuals with dengue hemorrhagic fever found that just 5 persons (0.125%) had moderate symptoms following a 10-day homoeopathic therapy, while the other individuals showed no indications or symptoms of the illness [13]. Migowski also found that eupatorium perfoliatum had superior clinical results against classic Dengue. Phosphorus, which has an affinity for the liver, affects the

functional integrity of this organ and the production of coagulation factors. Additionally, Crotalus horridus exhibited efficacy against dengue strong hemorrhagic fever [14]. Robin said that Aconitum napellus is effective in treating high-grade fever, while Bryonia alba and Eupatorium perfoliatum have therapeutic properties for bone fever and discomfort behind the sockets. Citrullus eye colocynthis, China boliviana, and Hamamelis are recommended for Rhus hemorrhagic diseases. whereas toxicodendron and Gelsemium sempervirens are mostly given for urticaria and skin infections. Phosphorous is used for treating anaemia. Hence, the amalgamation of these medications has a significant potential to manage symptoms of dengue and enhance haematological parameters [15]. This research was done on a limited sample size, which may have had an impact on the reported findings.

#### CONCLUSION

The homoeopathic formulation demonstrated superior treatment efficacy for Dengue compared to the usual maintenance medication advised by the World Health Organisation (WHO). Therefore, the homoeopathic cure has the potential to be a useful weapon against this potentially fatal illness. However, further research is necessary to determine the actual efficacy of the formulation in treating Dengue.

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