

Review Article

A review on marketed *Carica papaya* leaf extract (CPLE) supplements for the treatment of dengue fever with thrombocytopenia and its drawback

SURAJ MANDAL^{1*}, DR. VISHAKHA JAISWAL², KM SHIVA³^{1,2,3} Department of Pharmacy, N.K.B.R. College of Pharmacy and Research centre, Meerut – Hapur Road, Phaphunda, Meerut, 245206, Uttar Pradesh, India

*Corresponding Author

Email ID: sk8006721807@outlook.com

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ABSTRACT

Aim: In this review, there is detail description of the supplements present in the market for the treatment of dengue a deadly viral disease. According to WHO survey, 40% of the population, all around the world are affected by this disease.

Materials and Methods: All the facts and data was possessed from various published original research papers, published review articles, web pages and many other online data base which were related to the topic. Dengue can be transmitted by the mosquitoes (*Aedes aegypti*) which are infected with one of the four dengue virus serotypes. At present there is no therapeutic treatment for this serotype dengue and there are no proper medications available for this.

Result and discussion: It is found that the supplements of *Carica papaya* leave have shown promising therapeutic prospect due to the platelet increasing property, which is helpful for the dengue treatment.

Conclusion: At the end of this review there should more emphasize on herbal formulation *C. papaya* for improvisation and modernization for better patient care.

Keywords: *Carica papaya* leaves, dengue, *Aedes aegypti*, supplements

INTRODUCTION

Dengue is the severe arthropod- born viral disease which is shown mainly in tropic or equatorial areas and that may be caused by morbidity and mortality in human beings. Dengue is a severe viral infection with disastrous complication (Gupta N, 2012). Disease caused by dengue virus *Aedes* mosquitoes which is also called as female mosquitos. Mosquitoes belongs to *Aedes aegypti* is a genus that are found in tropical and subtropical zones, but now found in all continents except Antarctica (Rajapakse S, 2012).

Dengue virus belongs to family Flaviviridae. Flavivirus is the primary or chief vector which is responsible for spread the dengue between the human. It was confirmed by the world health organization (WHO) that 40% of population (approximately 2.5 billion people) among in the world are infected by the dengue (WHO, 2009). Dengue fever first time derived from "water poison" which is directly co-relate with flying insects in a Chinese medical encyclopaedia at 992 from the Jin Dynasty (265-420 AD). There is no any delicate remedial treatment so it can be cure with proper supervision of supportive care or medicaments and keeping careful watch for possible danger or difficulties or different phases

of patient that can be also treatment by the vigilant fluid administration.

After bite of *Aedes* mosquito's main complication is show in the patient is haemorrhagic fever and plasma leakage (protein and fluid component of blood leak from blood vessels). It is come out when the actuation the contagious monocytes and T-cells, therefore it will show endothelial cell dysfunction (in small arteries, inner layer will not able to perform its normal functions) and resulting in plasma leakage in dengue patient. Now this plasma leakage hampers the blood clotting therefore resulting in death of the patient. Simply it is found that dengue patient having low platelet count if platelet count will increases then rate of dengue patient death will be reduced (Kabra S.K, 2018).

Papaya is worldwide used fruit also known as a *carica papaya* linn belonging to family Caricaceae. Papaya leaves extract having the anti-dengue therapeutic activity because of its phytochemical constituents which increases platelet count in human being therefore it will help reduce the haemorrhagic fever from the dengue patient (Aravind G, 2013).