

Socioeconomic Status of Dengue Patients Receiving Platelet Transfusion: Original Article

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Abstract- Dengue is the most prevalent mosquito borne world wide disease, representing a major social, economic and health burden to many countries. Platelet transfusion is given in those patients who is either bleeding or having haemorrhagic symptoms along with thrombocytopenia. The study was conducted in the Vijayanagar Institute Of Medical Sciences (VIMS), Blood Bank, Bellary between September 2012 to November 2012 for a period of 3 months. A total of 264 patient attenders were interviewed who had come to the blood bank with a requisition for platelet concentrate. By seeing the locality and monthly income, 190(72%) of the individuals belonged to low-socioeconomic group and 74(28%) belonged to high-socioeconomic group. Public health educational campaign targeting hot-spot areas could be a logical approach to minimize the impact of the disease. Judicious use of platelet concentrate is suggested as the disease is more prevalent in low-socioeconomic group.

Index Terms- Platelet transfusion, low socioeconomic group, high socioeconomic group, dengue

I. INTRODUCTION

Dengue is the most prevalent mosquito borne disease world wide, representing a major social, economic and health burden to many countries with limited resources.⁽¹⁾ Dengue virus is a flavivirus that affects 50-100 million people annually. Over half of the world's population resides in areas potentially at risk for dengue transmission, making dengue as one of the most important viral disease transmitted by arthropod vectors in terms of mortality and morbidity.⁽²⁾ In developing countries like India, Pakistan, Srilanka, Myanmar, preventable disease such as Dengue Fever(DF)/ Dengue Haemorrhagic Fever(DHF) have the potential to cause the greatest mortality rate. The widespread distribution and rising incidence of dengue virus infection is related to a wider distribution of *Aedes Aegypti*.⁽¹⁾ The distribution of dengue and its vectors has expanded dramatically over the last 30 years. There are many factors which contribute in the rise of dengue.⁽³⁾

- Population Growth: It is one of the important factor for the increase in dengue. Day to day the population is increasing. The incorporation of land for food production and haphazard deforestation, in combination towards global warming creates the condition for the vector borne diseases like dengue.

- Unplanned Urbanization: This factor is vitally important in developing countries like India, due to constant migration from country side to the cities, nearly always accompanied by the lack of water for human consumption, inadequate disposal of liquid and solid wastes leads to the rise in dengue.
- Air Travel: Along with internal migration, the marked increase in air travel favours the movement of dengue virus between the endemic areas and the areas free from the disease. Due to people's arrival during the incubation period and subsequent infection of local mosquitos and development of epidemics.
- Poor sanitary conditions: The main factor directly or indirectly influencing the magnitude of dengue transmission is the low socio-economic conditions and poor sanitary conditions.

The South-East countries such as India, Thailand, Myanmar are at the highest risk of DF/DHF accounting for nearly half of the global risk. In India, epidemics are becoming more frequent and are straining the limited resources of the public health system. Many dengue cases are self-limiting but bleeding in dengue is one of the most dreaded complications and is associated with higher mortality rate in DFH. Platelet transfusion is given in those patients who is either bleeding or having haemorrhagic symptoms along with thrombocytopenia. There is shortage of blood and blood components in most of the developing world. The resources are inadequate in terms of meeting the ever growing demand of blood components especially platelets. Appropriate use of blood components is required to ensure their availability.⁽²⁾ This study was therefore undertaken to evaluate the socio-economic status of the dengue patients receiving platelet transfusion.

II. MATERIALS AND METHODS

The study was conducted in the Vijayanagar Institute Of Medical Sciences (VIMS) Blood Bank, Bellary between September 2012 to November 2012 for a period of 3 months.

A total of 264 patient attenders were interviewed who had come to the blood bank with a requisition for platelet concentrate. They were interviewed in a local language with a well set of questionnaire as shown in Table-1. People who failed to respond to all the questions or who left before completing the interview were excluded. Socio-economic status was assessed based on the monthly income (>/<Rs.15000) and locality (type of

the house, no. of rooms, no. of individuals living in the house, water stagnation around the house, animal rearing and rented /own house). Both these variables were used in our questionnaire. Every individual was given a total score based on these two variables in order to categorize them into high and low

socio-economic groups. Anyone scoring >50% was categorized as belonging to the high socio-economic group while people scoring <50% were categorized as low socio-economic group. At the end of the interview each respondent was provided a handout with information related to dengue fever.

Table-1 showing the questionnaire for dengue fever

