



KNOWLEDGE AWARENESS AND PRACTICES REGARDING DENGUE, PREVENTION AND MANAGEMENT AMONG RURAL COMMUNITY IN WESTERN MAHARASHTRA

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ABSTRACT **Background:** Dengue fever transmitted by *Aedes Aegypti* is an arboviral disease endemic in the Asian subcontinent. It has emerged as a notable public health problem in recent decades. Rapid urbanization environmental changes and neglected areas results in vector breeding causes rise in dengue outbreaks

Aims & Objectives: To study the knowledge awareness and practices regarding dengue among rural and slum communities in Pune city

Method & Materials: This community based cross sectional study was conducted in Wadki village; sample area was the rural slums of the city. 210 respondents from village. The aim was to assess the knowledge and awareness, preventive measures and most prevalent source of information regarding dengue. Simple random sampling method was used for sampling and questionnaire was administered by interview method.

Results: Results showed that knowledge and awareness about dengue fever was generally inadequate. Only 72.62% of the respondents didn't even answer that mosquito was responsible for the transmission of dengue. Majority also had no sufficient knowledge that dengue mosquito bites at day time and breeds in clean water. 70-87% people don't know the dengue symptoms and preventive method were coils, liquid vaporizers.

KEYWORDS :

INTRODUCTION

“Still Waters Breed Death.... Stop Dengue”

Dengue viruses are arboviruses capable of infecting humans, and causing disease. These infections may be asymptomatic or may lead to classical dengue fever or dengue hemorrhagic fever without shock or dengue hemorrhagic fever with shock.

Dengue fever is a self limiting disease and represents the majority of cases of dengue infection. A prevalence of *Aedes Aegypti* and *Aedes Albopictus* together with the circulation of dengue virus of more than one type in any particular area tends to be associated with outbreaks of dengue hemorrhagic fever and dengue shock syndrome. Some 205 billion people i.e., two fifth of the world's population in tropical and subtropical countries are at risk of the disease. An estimated 50 million dengue infections occur worldwide annually and about 500000 people with DHF require hospitalization each year. Approximately 90 percent of them are children aged less than five years and about 20.5 percent of those affected die. Epidemics of dengue are increasing in frequency.

In India the risk of dengue has shown an increase in recent years due to rapid urbanization, life style changes and deficient water management including improper water storage practices in urban, peri urban and rural areas leading to proliferation of mosquito breeding sites. The disease has a seasonal pattern i.e., the cases peak after monsoon and it is not uniformly distributed throughout the year. However in southern states and Gujarat transmission is perennial.

The following host factors contribute to more severe disease and its complications.

- Infants and elderly
- Obesity
- Pregnancy
- Peptic ulcer disease
- Women who are in menstruation or having abnormal bleeding
- Hemolytic disease such as G6PD, thalassemia and other hemoglobinopathies
- Congenital heart disease
- Chronic disease such as diabetes mellitus, hypertension, asthma, ischemic heart disease, chronic renal failure, liver cirrhosis
- Patients on steroid or NSAID treatment

Control Measures

a. Mosquito Control

Vectors of DF and DHF breed in and around houses and in principles can be controlled by individual and community action, using anti adult and anti larval measures.

b. Vaccines

CYD-TDV is a prophylactic tetravalent, live attenuated viral vaccine developed by Sanofi Pasteur in December 2015. The vaccination

schedule consists of 3 injections of 0.5ml administered at 6 months intervals. The indication from the first license is for the prevention of dengue illness caused by dengue virus serotypes 1, 2, 3 and 4 in individuals 9-45 years or 6- 90 yrs of age, living in dengue endemic areas. The lower limit of the indication at 9 years of age was chosen due to a safety concern in children aged 2-5 years identified in the phase 3 clinical trials.

c. Other Measures

Isolation of the patient under bed nets during the first few days, individual protection against mosquitoes. The personal prophylactic measures are wearing full sleeves shirts and full pants, use of mosquito repellents, creams, liquids, coils, mats, and bed nets for sleeping infants and young children during day time to prevent mosquito bite.

The environmental measures are detection and elimination of mosquito breeding places, management of roof tops, porticos and sunshades, proper covering of stored water, observation of weekly dry day.

Types of Family

The survey result showed that majority of the family (61%) in the community is of nuclear type while the rest (39%) is of joint type.

Religion

The survey report shows that majority of religion (92%) in community is Hindu rest 4% is Buddhism (3%) is Muslim and (1%) is Jain

Age and Sex Composition

Age group of 0-14 years male population is about 6% more than female, whereas in the age group 15-45 years male population is 10% more than female and in the age group more than 45 male population is 1% more than females.

Education

Literacy rate in India has grown up 74% (2011 census figure). Male literacy stands at 88.36% while female literacy rate is at 75.87%. Wadki village male literacy stands at 91.07% while female literacy rate is at 80.43%

Occupation

National unemployment rate is 3.52 in 217. In Wadki is male 5% and female 45%.

Income

Survey report showed that majority of income 49% is manageable while rest 45% is saved and (6%) is debt.

Nutrition

The survey result showed that majority of the people 69% in the community are non vegetarian while the rest 31% are vegetarian.

Type of Houses

The survey result showed that majority of houses 98% are pucca while kutch houses are 1% in number.

Over Crowding

The survey result shows that in majority of houses overcrowding is not present.

Problem statement: knowledge awareness and practices regarding dengue ,prevention and management among rural community in western Maharashtra

Aim

To study the knowledge, awareness and practices regarding dengue among rural and slum communities in Wadki village

Objectives

1. To assess how many people have knowledge and awareness of dengue
2. To know about most prevalent preventive measures
3. To ascertain the source of information regarding dengue.

Materials and Methods

A survey was done from Sep-Oct 2018 to assess the knowledge, awareness and practices regarding dengue were conducted among residents of selected rural villages and slums with different socio economic backgrounds in Wadki, Pune. The total sample size was 210. Face to face interview based on a questionnaire developed by investigator which comprised of 26 questions and was divided in to four sections which include

- Sociodemographic profile
- Knowledge and awareness about the dengue
- Practices related to prevention against disease
- Surrounding observations

Interviews were conducted by investigators who underwent training in interviewing techniques under professional supervision. At the end of the interview each respondent was provided with incidental health education on dengue fever its prevention and management. This health education contained information on the vector, its breeding sites, biting time, malaria and dengue fever its transmission, symptoms, treatment and preventive measures.

Need for the Study

Dengue fever (DF), transmitted by *Aedes Aegypti* is an arboviral disease endemic in the Asian. it has emerged as a notable public health problem in recent decades in terms of the mortality and morbidity associated with it. According to WHO incidence of dengue has shot up 30 fold in the past fifty years.

It has been estimated that globally there were 50-100 million dengue infections taking place annually. South East Asia is one of the regions with highest risk of DF/DHF, accounting for 52% of the global risk. The case fatality rate in patients with dengue hemorrhagic fever and dengue shock syndrome can be as high as 44%. Infact the problem has become hyper endemic in any urban, periurban and rural areas with frequent epidemics.

Dengue is endemic in many parts of India epidemics are frequently reported from various parts of India and abroad. India emerges in the analysis as the country with the world's highest dengue burden, with about 34% of all such cases occurring here. The cases of malaria and chikungunya have shown a dip across the country but dengue cases are picking up. The fatalities caused by the mosquito borne disease have also gone up. In 2012, 247 deaths took place, compared to 169 fatalities reported in the previous year. In 2009 and 2010 the number of fatalities due to dengue was 96 & 110 respectively. Incidence of dengue has been attributed to increased air travel, urbanization, amplified mosquito population due to deterioration in the public health infrastructure and changing climatic conditions.

Since there is no vaccine, vector control is the ideal way to control dengue. Vector control methods can be successful, only if there is community based programme, it is important to assess the community's perception regarding the disease, its mode of transmission and breeding sites. knowledge , awareness and practice studies serves as an educational diagnosis of a population. This information helps programs set communication objectives linked to increases community engagement and demand for services and

develop tailored strategies appropriate for the social, cultural and political contexts of at risk communities.

DISCUSSION

The current study documented the knowledge, awareness, and preventive practices regarding dengue among the communities of Wadki, in view of the fact that this city had been hit by several dengue outbreaks in recent years. the poor living condition in the low socio economic areas not only contribute to the spread of the disease but also make it difficult for health services to curtail the vector population effectively in these areas understanding people perception and their practices could help in identifying of targets areas and also in formulating strategies so to combat these outbreaks.

A large portion of the sample population could identify the vector as a mosquito but little was known about the species. This study found that 72.62% respondents didn't answer mosquito bite as cause of dengue. The knowledge of dengue disease symptoms was much lower, especially the dengue specific symptoms of fever with retro orbital pain, rashes which are mentioned by only 13.75% of study participants.

Surprisingly, about majority of respondents had wrong knowledge that dengue mosquito breeds in unclean water. Moreover, our study shows that around 25.25% participants reported that mosquito breeds on stagnant water. Bridging this gap in knowledge is important in planning and designing programs and activities to educate the respondents on preventive measures to combat dengue.

Most respondents were aware of measures to protect themselves against contact with mosquitoes through window screening. Mosquito mat/coil/liquid vaporizer/ repellent cream, use of bed nets, using fans, use of smoke to drive away mosquitoes especially in urban and slum areas.

However, there was no utilization of insecticide sprays professional pest control and screen windows as ways to reduce mosquito and prevent dengue. These strategies may be considered as costly considering that most of the respondents have limited financial capabilities in slum and rural areas of the city. This suggests that government educational campaigns should give more emphasis on cost effective ways of preventing dengue such as environmental measures and control.

Most important role seemed to be played by media including television and radio. In the study health professional and television/radio was the most important source of information. Further it was found that the role of health personnel in creating awareness in-respect to DF was satisfactory as 44.87% of those who are aware, got the relevant information from health staff. Interestingly only a few proportion of the respondents cited schools and health centres as sources of dengue information.

Recommendations

Based on findings, it is recommended that future campaigns should involve more aggressive health education through active involvement of health workers and community representatives. Mass media can also be used as a tool for community awareness. Health education programs should not only focus on providing knowledge and creating awareness but also ensure that this knowledge get translated in to practice.

This study provides important baseline information. It can also help in identifying areas that can be targeted in future campaigns. The knowledge obtained from this study may be used to monitor the effectiveness and progress of dengue prevention campaigns by the government officials for effective implementation of programs. more over provides evidence for allocation of resources for preventing dengue in the rural and slum areas.

Thus, government can maximize the potential use of these educational and health institutions by providing adequate support like information, education and communication materials and other visual aids that may effectively communicate dengue preventive measures.

Conclusion

The knowledge and awareness about dengue fever is generally inadequate with only 59.25% of the sample. People had no sufficient knowledge that dengue mosquito bites in day time and breeds in clean

water. They are practicing preventive measures at night. There is a need to make villages and slum people aware of different preventive practices and reduce this knowledge application gap. Health professionals and media like TV and radio were the important role in conveying health information to the population.

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