

The Community Knowledge and Practices Regarding Dengue Fever in an Urban Slum Area of South India

Keerti S. Jogdand, Pravin N. Yerpude

Department of Community Medicine, Katuri Medical College and Hospital, Katuri Nagar, Chinakondrupadu, Guntur (A.P.)

(Received September, 2012)

(Accepted December, 2012)

Abstract:

Dengue/Dengue Hemorrhagic Fever (DHF) is an emergent disease in India. The present study was carried out with the aim of assessing knowledge regarding Dengue fever among community in an urban slum area of Andhra Pradesh. This cross sectional study was undertaken in an urban slum area of Uuban Health Centre, Guntur, which is a field practice area of Department of Community Medicine, Katuri Medical College and Hospital, Guntur.

Out of 370 respondents, 291(78.65%) knew that dengue fever is transmitted by mosquito. Only 38(10.27%) persons could enumerate 3 symptoms of Dengue (fever, headache and bleeding). Regarding knowledge about breeding places only 276 (74.59%) respondents knew about breeding places of mosquitoes. Regarding the source of information on Dengue fever, 191 (51.62%) came to know about Dengue fever through television. Despite good awareness about dengue fever, adoption of the mosquito control methods was poor in the area.

Key Words: Community perception, Awareness, Source of knowledge.

Introduction:

Dengue infection is increasingly recognized as one of the world's emerging infectious diseases (Guzman & Kouri, 2002; Gubler, 2002; Halstead, 1999). About 50–100 million cases of dengue fever and 500,000 cases of Dengue Hemorrhagic Fever (DHF), resulting in around 24,000 deaths, are reported annually (Porter et al, 2005; WHO, 1997). Over half of the world's population resides in areas potentially at risk for dengue transmission, making dengue one of the most important human viral disease transmitted by arthropod vectors in terms of morbidity and mortality (Gibbons & Vaughn, 2002). Dengue/DHF is an emergent disease in India. It is endemic in some parts of the country and contributes annual outbreaks of Dengue/ DHF (Sharma et al, 2000). It mostly affect urban and peri urban areas. The geographical distribution of disease has greatly expanded and number of cases has increased dramatically in the last 10 years. In India, the risk of dengue has shown an increase in recent years due to urbanization, life style changes and deficient water management. Improper water storage practices in urban, peri-urban and rural areas lead to proliferation of mosquito breeding sites. During 2009 in India, about 15,509 cases were reported with 89 deaths.

Dengue virus infection is endemic in Andhra Pradesh. In the year 2009, 1,190 laboratory confirmed cases of dengue fever had been reported in Andhra Pradesh with 11 deaths (Govt. of India, 2010). The present study was undertaken with the aim of assessing knowledge regarding Dengue fever among community in an urban slum area of Andhra Pradesh. Another aim was to assess, whether simple preventive measures to check and destroy the breeding sites of mosquito like checking of coolers, discarded tyers, flower pots etc. are being practiced in the community or not?

Material and Methods:

A present cross sectional study was undertaken in an urban slum area of UHC, Guntur, Andhra Pradesh which is field practice area of department of Community Medicine, Katuri Medical College and Hospital, Guntur. Out of 3 field practice area, one area Shrinavas Rao Thota was selected randomly for study. Total houses in the area were 1970. Every fifth house was selected by systemic random sampling method for collecting information. Therefore, 395 houses were selected for the study. Out of which 25 houses were locked at the time of visit. Hence, total houses visited were 370. In the selected house, an adult member in the family, who was present at the time of visit, was interviewed for collection of information using pre-tested close ended structured questionnaire. The present study was carried out from Jan 2010 to April 2010.

Corresponding Author: Dr. Keerti S. Jogdand,
Department of Community Medicine, Katuri Medical College and Hospital, Katuri Nagar, Chinakondrupadu, Guntur-522019 (A.P),
Phone No.: 09490449670
E-mail : drrajupravin007@yahoo.com

Results:

Out of 370 study subjects, 234 were males and 136 were females. Out of total respondents 287 (77.57 %) were from the age group of 26-40 years; 343 (92.70%) were literates (Table I). Overall 291(78.65%) respondents knew that dengue fever is transmitted by mosquito and 54 (14.59%) persons associated Dengue with flies/person to person transmission (Table II) Regarding knowledge about signs and symptoms of dengue, 214 (57.84 %) persons could enumerate one symptom (fever), 59(15.95%) persons could enumerate 2 symptoms (fever, bleeding) and 38(10.27%) persons could enumerate 3 symptoms of Dengue (fever, headache and bleeding) (Table III). Two hundred seventy six (74.59%) respondents knew about breeding places of mosquitoes. “Coolers” as the most probable breeding site (for mosquitoes) was named by 147 (39.73%) respondents followed by “cooler and tyres” by 78(21.08 %) respondents (Table IV). Regarding personal protection against mosquito bite, 274 (74.05%) respondents were relying upon Mats/coils and 63 (17.03 %) were using bed nets. Further, 33(08.92%) respondents did not give any comments (TableV). Regarding the source of information on Dengue fever, out of 370 respondents, 191 (51.62%) came to know about Dengue fever through television and/or radio followed, by 81(21.89%) to newspapers and banners, 41(11.08%) respondents came to know through friends, relatives and 57(15.41%) respondents through health workers.

Table I: Education status of respondents (n=370)

Education	Number	Percent
Illiterate	27	07.30
Higher secondary	33	08.92
Senior secondary	79	21.35
Graduate	141	38.11
Post graduate	90	24.32

Table II: Knowledge regarding transmission of dengue fever

Route of transmission	Number	Percentage
Mosquito	291	78.65
Flies	54	14.59
Don't know	25	06.76

Table III: Knowledge about signs and symptoms of dengue fever

Signs and symptoms	Number	Percentage
Fever	220	59.46
Headache	53	14.33
Fever, bleeding	59	15.95
Fever, headache and bleeding	38	10.26

Table IV: Knowledge regarding breeding places of mosquitoes (n=370)

Breeding site	Number	Percentage
Coolers	147	39.73
Coolers and tyres	78	21.08
Coolers, tyres and flower pots	17	04.59
Burrows and pits	09	02.43
Vessels/Containers	13	03.52
Coconut shells	12	03.24
Not aware	94	25.41

Table V: Use of Personal protection measures against mosquitoes

Personal protection measures	Number	Percentage
Mats/coils	274	74.05
Bed nets	63	17.03
Nothing	33	08.92

Discussion:

Overall 291(78.65%) respondents knew that dengue fever is transmitted by mosquito and 54 (14.59%) persons associated Dengue with flies/person to person transmission. A field-based study from Thailand (Swaddiwudhipong et al, 1992) also had similar findings. Gupta et al (1996) concluded that 71 and 89 percent respondents from rural and urban areas respectively from Delhi had the knowledge regarding transmission by mosquito. Regarding knowledge about signs and symptoms of dengue, 214 (57.84 %) persons could enumerate one symptom (fever), 59(15.95%) persons could enumerate 2 symptoms (fever, bleeding) and 38(10.27%) persons could enumerate 3 symptoms of Dengue (fever, headache and bleeding). Similar findings were also reported by study conducted in Kuala Kangsar (Hairi et al, 2003). Regarding knowledge about breeding places, 276 (74.59%) respondents knew about breeding places of mosquitoes. “Coolers” as the most probable breeding site was named by 147(39.73%) respondents followed by “cooler and tyres” by 78 (21.08 %) respondents. It has already been substantiated that people have good idea about the breeding places of mosquitoes (Swaddiwudhipong et al, 1992; Hairi et al, 2003). Two hundred twenty three (60.27 %) respondents were having redundant tyres, plastic pots and flower pots on rooftops or in their houses, and they accepted the fact, that they were never checking them for mosquito breeding. Out of 114(30.81%) persons having cooler in their house, 48 (42.11%) said that they never check coolers for mosquito breeding. Only 24(21.05 %) persons were correctly checking the cooler on weekly

basis. It may be concluded that though the knowledge regarding dengue is good in the general population, practice of checking coolers, tyres and flower pots is quite poor. Similar findings were also reported by study conducted in Brazil (Degallier et al, 2000). On the contrary, a study from Kuala Kangsar (Hairi et al, 2003) concludes a significant association between knowledge of dengue and attitude towards Aedes control. Regarding the source of information on Dengue fever, out of 370 respondents, 191 (51.62%) came to know about Dengue fever through television and/or radio followed, by 81 (21.89%), to newspapers and banners. Only 57 (15.41%) respondents came to know about dengue through health workers. This is in agreement with study done in Thailand (Swaddiwudhipong et al, 1992).

Conclusion and Recommendations:

Though the knowledge regarding dengue is good in the general population, adoption of the mosquito control methods was poor in the area. So Strengthening of surveillance along with health education to the community and proper training of health personnel can go long way in control of Dengue infection.

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Source of Support : Nil.

Conflict of Interest: None declared.