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

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.
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 (Table V).

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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