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Original Research Article

Knowledge, attitude and practices regarding dengue in a rural setting of Jammu

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ABSTRACT

Background: Rapid urbanization, environmental changes and migration of communities is becoming a major reason for increase in number of cases and deaths due to dengue over recent years. Key lies in prevention, since only symptomatic treatment is available. Knowledge, attitude and practice studies provide important information about prevalent scenario regarding awareness of particular health problem in a community.
Methods: The present study was descriptive and cross sectional in nature, conducted in July 2017. The study participants belonged to village Tanda of Block RS Pura which is a field practice area of Department of Community Medicine, Government Medical College Jammu. The data was collected by a face to-face interviews of respondents after obtaining informed consent. Enumerators were provided a schedule containing formalized set of questions on knowledge, attitude and practice of dengue control. Information was collected by interviewing the available adult in every second household.
Results: Knowledge about dengue was intermediate. Only 35% of the respondents knew atleast two most common symptoms of dengue. They had insufficient knowledge regarding time of dengue mosquito bite and common breeding sites. However attitude of people regarding dengue was good. Almost all the respondents think that dengue is dangerous and one should consult a registered Medical Practioner in case dengue occurs. Commonly used preventive methods included coils and sprays. Drains and surroundings were cleaned to prevent mosquito breeding.
Conclusions: There is an urgent need to increase awareness of people especially belonging to rural communities regarding prevention and common signs and symptoms of dengue.

Keywords: Dengue, Knowledge, Awareness, Practices, Rural community, Jammu

INTRODUCTION

Dengue viruses are arboviruses infecting humans. It is transmitted by the bite of an aedes mosquito infected with one of the four dengue virus serotypes. The spectrum of illness ranges from asymptomatic infection to classic dengue fever or dengue haemorrhagic fever with shock or without shock. The incidence of dengue has grown dramatically around the world in recent decades. The actual numbers of dengue cases are underreported and many cases are misclassified. One recent estimate indicates 390 million dengue infections per year (95% credible interval 284–528 million), of which 96 million (67–136 million) manifest clinically (with any severity of disease).[1] Dengue is endemic in India and has become a major public health problem. It is a leading cause of hospitalization and death among children and adults. There has been an increasing spread from urban and periurban areas to rural areas. During epidemics, infection rate among those who have not been previously exposed to the virus are often 40 to 50% but can also reach 80 to 90%.[2] In Jammu, there has been recent increase in the number of cases from 79 cases in 2016 to 488 cases in 2017. During monsoon season there is water

logging at many places and the main reason cited was stagnant water. Measures are required to be taken at personal, household, community and departmental level to fight the disease. Dengue prevention and control depends on effective vector control measures. A dengue vaccine has been licensed by several National Regulatory Authorities for use in people 9-45 years of age living in endemic settings.[3] Preventive measures require support, cooperation and participation by the community. Therefore, it is vital to know the level of knowledge, attitude and the practices (KAP) of the community concerning the disease. This study could provide useful baseline information, which could be extrapolated and utilized to improvise on the existing strategic and awareness plan being adhered to under the NVBDCP.

METHODS

The present study was descriptive and cross sectional in nature, conducted in July 2017. The study participants belonged to village Tanda of Block RS Pura which is a field practice area of Department of Community Medicine, Government Medical College Jammu. Total population of Tanda is 1350 with 296 households. The data was collected by face to-face interviews of respondents who agreed to participate in the study. Enumerators were provided a *schedule containing* formalized set of questions on knowledge, attitude and practice of dengue only. The schedule was divided into three sections; the first section concerned with knowledge comprised 6 questions, the second part related to practice and the third part concerned with attitude each consisted of 4 questions. The questions were asked to the respondents and responses were noted by enumerators. Every enumerator filled 4 interview schedules. The data was collected from 148 respondents / households by interviewing the available adult in every second household.

Data was entered and analysed using Windows 7 Microsoft Excel. Each question was analysed individually. Knowledge, attitude and practice were assessed using a scoring system.

RESULTS

A total of 148 individuals were interviewed. Nearly 81 (55%) respondents belonged to age group of 21-40 years. Mean age of respondents was 35.98 years. There were 78 males and 70 females with male to female ratio of 1:1.1. Maximum females who participated in the interview were housewives (94.3%). Regarding occupation, majority were either students or Government employees. Education status was good as overall 83.7% respondents were literates (Table 1).

Knowledge about dengue was intermediate. 95.3% persons knew that fever is the common symptom. 52 (35%) persons enumerated that fever with rash as the most common symptom and only 5 persons knew atleast three symptoms of dengue i.e. fever with rash with retro orbital pain. Almost all people (93.2%) knew that mosquito bite is the mode of spread 102 persons (69%) had knowledge that dengue mosquitoes breed in artificial collection of water like pots, tyres and buckets. 12 persons (8.1%) had correct knowledge about time of mosquito bite. Regarding treatment for dengue, 142 persons (96%) knew that there is no treatment available for dengue (Table 3).

Attitude towards dengue

Most of participants 144 (97.3%) think that dengue is dangerous for their families. About 124 (83.7%) persons agree that dengue is preventable. Maximum people think that both people of community and government are responsible for controlling mosquito breeding. 93% people think that person should consult registered medical practitioner in case of suspicion of dengue (Table 4).

Practice

The practices employed in community to prevent dengue are good. Good number of people used mosquito coils (77.7%) and spray (47%). Nearly 52% people had meshed doors and windows. Majority had practice of cleaning drains and surroundings and draining artificial water regularly. In case dengue is suspected, almost all house-holds had practice of consulting doctor and visit hospital. When asked about the initiatives taken in last three years to spread awareness about dengue almost all respondents (95%) told that there were no initiatives taken by anybody to spread awareness about dengue (Table 5).

Table 1: Age distribution of respondents.

Age (in years)	Male	Female	Total
11-20	13	8	21
21-30	25	20	45
31-40	14	22	36
41-50	14	7	21
51-60	5	6	11
61-70	7	7	14
Total	78	70	148

Table 2: Distribution of respondents according to occupation and education.

Occupation	Number (N=148)	Percentage (%)
Government employees	17	11.5
Professional workers	2	1.35
Skilled workers	9	6.08
Business men	18	12.1
Housewife	66	44.6
Students	32	21.6
Unemployed	4	2.7
Education		
Illiterate	24	16.2
Primary	14	9.4
Secondary	52	35.1
Higher secondary	39	26.4
Graduate	19	12.8

Table 3: Knowledge of respondents regarding dengue.

Common symptoms of dengue	Number of people (n)	Percentage (%)
Fever	141	95.3
Fever with rash	52	35.1
Retroorbital pain	11	7.4
Joint/backache	36	24.3
Diarrhoea/stomachache	18	12.1
Mode of spread		
Mosquitoes	138	93.2
Other modes	88	59.5
Common breeding sites		
Artificial collection of water	102	69
Dirty water	129	87.2
Plantation	27	18.2
Garbage	82	55.4
Dont know	2	1.4
Most frequent time of dengue mosquito bite		
Dawn	1	0.7
Morning	5	3.4
Daytime	12	8.1
Evening	82	55.4
Anytime	57	38.5
Communicable disease		
Yes	56	37.8
No	84	56.7
Don’t know	8	5.4
Treatment available		
Yes	6	4
No	142	96

Table 4: Practice of respondents regarding dengue.

	Number of people (n)	Percentage (%)
Protective measures to prevent dengue		
Mosquito sprays	71	48
Mosquito coil	115	77.7
Mosquito net	60	40.5
Meshed doors & Windows	77	52.2
Wearing full sleeve shirts	47	31.8

Continued.

	Number of people (n)	Percentage (%)
Methods to prevent breeding sites of dengue		
Clean drains and surroundings	121	81.8
Spraying/fogging with insecticides	45	30.4
Draining artificially water regularly	72	48.6
Covering stored water	54	36.5
Do not know	2	1.4
Immediate steps one would take once dengue is suspected		
Consult doctor/hospitalization	146	98.6
Intake of plenty of fluids	8	5.4
Rest	16	10.8
Self medication	2	1.35
Alternative medicine	2	1.35
Initiatives taken in last 3 years to spread awareness about dengue		
Yes	6	4
No	141	95.8
Do not know	1	0.7

Table 5: Attitude of respondents regarding dengue.

	Number of people (n)	Percentage (%)
Do you think dengue is dangerous for your family		
Yes	144	97.3
No	2	1.4
Do not know	2	1.4
Whom should a person consult in case of suspicion of dengue		
Registered medical practitioner	137	92.6
Local chemist	19	12.8
Self-medication	2	1.4
Do you think dengue is preventable?		
yes	124	83.78
No	18	12.1
Do not know	6	4
Who is responsible for controlling dengue mosquito breeding?		
People of community	28	18.9
Government	11	7.4
Both	106	71.6

DISCUSSION

Maximum persons (93.2%) knew that mosquito bite is the mode of spread but 88 persons (60%) also associated dengue with flies and water. Similar pattern of findings were observed in a hospital based study conducted in New Delhi, Thialand and study conducted in slum and rural area of Delhi.[4-6] Our study reported higher percentage of persons having knowledge about signs and symptoms of dengue. At least 95% of persons could enumerate fever as the most common symptom of dengue and 35% persons had knowledge about two common symptoms i.e. fever and rash. These figures were higher as compared to other studies.[4,6] However the findings corroborated with other researchers as well.[7,8] Less number of participants could enumerate more than two symptoms. So there was little less knowledge among respondents about different symptoms of dengue. Regarding common breeding sites of mosquitoes, 69% respondents had knowledge about breeding of dengue mosquitoes in artificial collection of water. This finding corroborated with various studies.[5-7] Large number of respondents did not know the biting time of dengue mosquito. This finding was similar to another study done in slums of Chandigarh city.[8]

Low level of knowledge observed was may be due to low literacy levels among participants. This reflects that we need to do more IEC activities regarding epidemiology and prevention of dengue.

Attitude of respondents regarding Dengue was better as compared to knowledge. Majority of persons (97.3%) thought that dengue is a dangerous disease. This figure was comparable to study done in Kuala Kangsar but higher than study done in Bihar.[7,9] However, almost 84% people believed that dengue is preventable. This was comparable with other studies.[7,9] Maximum people were

of the belief that controlling dengue is the responsibility of both government and people. Study done in Kuala Kangsar however highlighted the general opinion that it is the responsibility of people.[7] These findings accentuate the fact that the general sentiment points towards shared responsibility of both the government and the general population in control and prevention of Dengue. A study done by Pérez-Guerra et al regarding attitudes towards dengue prevention revealed that participants insisted that "neighbours" needed to control larval habitats, and the Government had the responsibility to fumigate.[10]

Regarding personal protection against mosquito bites, 115 (77.7%) respondents had practice of using mosquito coils and 71 (48%) were using mosquito sprays. In a study done in Kuala Kangsar district, almost all participants had the habit of using mosquito net and half used insecticidal sprays to reduce mosquito breeding. [7] A et al and Hairi et al had reported these methods to be most effective means of prevention.[11,12] In our study, 37% covered stored water to prevent mosquito breeding. This percentage is higher than another study where 25% respondents covered stored water.[7]

Overall the study revealed that there is urgent need to increase awareness about dengue in our communities by means of IEC activities through posters, pamphlets, lectures, role plays etc. focussing on its agent, spread, prevention and practices.

Limitation of the study

We would like to mention that this is a cross-sectional study done on small sample size which may not be truly representative of the entire community. Also we cannot analyse the relationship between various risk factors and dengue through this cross sectional study design.

We cannot totally rely on responses of respondents as they may give answers which may please the interviewer and are socially more acceptable. Moreover they are also prone to recall bias.

The study has provided useful baseline information about knowledge, attitude and practices of dengue.

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