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Knowledge Attitude And Practices Regarding Dengue Infection Among Pre-University College Students

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Abstract:

Introduction:- Dengue fever is one of the major vector borne disease. There is an upsurge noted in morbidity and mortality due to dengue especially in urban areas of the country. This is due to the favourable environmental conditions for growth of the vector Aedes Aegypti. Effective control measures can be undertaken with the help of community support and increased awareness regarding transmission of Dengue infection .The role of both private and public sector health care providers in these areas is very important to increase the awareness in community and motivating the people for reducing breeding sources of the vector. There is a wide gap between knowledge, attitudes and practices among the people regarding dengue infection.

Objective: - To study the knowledge, attitude, and practices regarding Dengue Fever among Pre-University college students.

Methods: - A cross-sectional study was conducted among 306 college students. After obtaining verbal consent, information was collected through pre designed, pre tested and self-administered questionnaire.

Results: - Majority of the students (73.9%) had good knowledge about signs, symptoms, and modes of transmission of dengue. Around 70 % considered dengue to be a serious illness and 40.52% believed that they are at risk of getting infection. Almost half (51.63%) said dengue is preventable. Very few (2.29%) did not use any effective dengue preventive methods such as spraying of insecticides and mosquito bed nets. Mass Media (66.66%) was the predominant
source of information about dengue fever.

Conclusion: - Our findings suggest that the students had good knowledge about dengue fever but sadly this did not translate to adoption of preventive measures. Campaigns should focus on educating and encouraging youth to adopt simple, inexpensive and preventive actions, such as, use of insecticide treated

bed nets and screening of homes.

Keywords: Dengue Fever, KAP, Pre-university students

I. INTRODUCTION

Dengue is regarded as one of the most important arboviral infections in the world. Dengue Fever (DF***)*** is an acute febrile illness of 2-7 days duration (sometimes with two peaks) with two or more of the manifestations like headache, retro-orbital pain, myalgia/arthralgia, rash, haemorrhaegic manifestation (petechiae and positive tourniquet test) and leucopenia[1]. Because of the symptoms of myalgia and arthralgia it is also called "break bone fever". The principle vector is a day biting, domestic mosquito, Aedes aegypti.

It is found in tropical and subtropical regions around the world mainly in urban and semi-urban areas. An estimated 50 million dengue infections occur worldwide annually and about 500,000 DHF cases hospitalized each year. Among them 90 percent are children of less than five years and 2.5 percent affected will die. Dengue fever and DHF is endemic in more than 100 countries. The most seriously affected regions are South-East Asia and Western Pacific. All the four serotypes are detected in our country and it is in hyper endemic category. (Category-A) The risk of dengue has increased in India due to rapid urbanization, lifestyle changes and poor water management which lead to proliferation of mosquito breeding sites. Dengue is endemic in 31 states /UTs. The case fatality rate in 2011 was 0.65 per cent with highest number of cases were reported from Punjab followed by Tamil Nadu, Gujarat, Kerala, and Andhra Pradesh.[2]

In the state of Karnataka, confirmed cases as on end of November 2013 were 6206 compared to 3704 cases as on end of November 2012, this shows steep increase in number of cases. High number of cases were seen in the districts, Bangalore city (1066 cases), Mysore (524 cases), Haveri (468 cases), Bellary (411 cases), Mandya (394 cases), Ramnagara (324 cases), Davangere (277 cases), and Bagalkot (254 cases).[3]

The World Health Organization and Centers for Disease Control and Prevention (CDCP) recommends extensive community educational campaigns that emphasize reducing vector breeding sites as an effective way of dengue prevention. Community education can be more effective in reducing dengue vector breeding sites than chemicals alone .Several studies suggest that better knowledge of dengue and dengue vector prevention practices among people was one of the predictors of better practices of dengue prevention.[4]

Considering the magnitude of the problem the present study was undertaken to assess the

knowledge of Dengue infection and the preventive practices among the young population of Chitradurga with the objectives to evaluate the knowledge, attitudes and practices regarding dengue infections among college students in Chitradurga.

Methodology:-

By using purposive sampling a cross-sectional study was conducted among 306 Pre-university college students. After obtaining verbal consent, information was collected by using pre designed, pre tested questionnaire. The questionnaire consisted of 54 questions divided in four sections, socio-demographic profile and sources of information, knowledge, attitude, practices and management related to dengue/ mosquito control .Data was collected over a period of two months from October to December 2013. Data was collected analyzed by using percentages and Chi square test.

Results :

A total of three hundred six (306) students participated in the study, out of which193 (63.07%) were males and 113 (36.93%) were females. The science (85 male and 32 female) and Arts &Commerce (108 male and 81 female) college students were included in the study.

All the students belonged to the age group of 17-18 years .Among them, 163 (53.26%) belonged to rural area and 143 (46.73%) to urban area. Majority of students were from class III (28.10%) and IV (29.4%) socio-economic groups. Predominant source of the information regarding Dengue infection was media (66.66%)

Majority of students were able to correctly identify typical symptoms of dengue such as fever (84.3%), Joint pains (50.32%), Muscle pain (49.01 %,) and rashes (37.25%) (Table 1).

On the other hand, very few students (18.63%) were aware that Aedes mosquito transmits dengue fever. Many students given responses about available measures to prevent breeding of mosquitoes, many respondents (67.97.0%) were aware that Covering water containers reduce mosquitoes, (62.09%) screening windows and using bed nets reduced contact with mosquitoes. Many participants felt it was necessary to remove standing water (81.37%), use of Insecticide sprays (60.78%), mosquito repellants (54.90%), cut bushes (48.36%) to prevent mosquito breeding and contact with mosquitoes. With respect to management of dengue, 34.31% said they would not take aspirin for dengue illness while 65.69% said they would. About 59.15% students said they would get plenty of water and rest if they had dengue.

Most of the students strongly agreed (42.16%) that dengue is a serious illness. Thus, 69.61% of participants effectively appreciated the serious nature of the disease. Out of 306 students, 51.62% of students agreed, (26.79% strongly agreedand24.83% agreed) that the disease is preventable. Only 40.51 % of the students thought they were at risk of contracting dengue fever. Most of the students prefer to use preventive practices to avoid contact with mosquitoes. For instance, 71.9% screened their windows from

mosquitoes, 66.6% used bed nets during the night, and 47.7% used insecticide sprays.

Discussion

Our study intended to assess the students' knowledge, attitude and practices related to dengue infection in Pre-University college Chitradurga, Karnataka. According to our study knowledge level of students is good which is not utilized in changing attitudes and practices to reduce the prevalence of the disease.

The knowledge level of the students on dengue fever reported in the study is comparable to the findings in similar KAP studies conducted in Westmoreland, Jamaica.[5] Garenda[6] and Thailand.[7] Most of the symptoms were not correctly responded by many students. The fever symptom was answered by majority of the students as similar study reports conducted by Gupta P*et al.* in rural and slum areas of Delhi after the dengue epidemic of 1996India.[8] Most of the students were not answered symptoms like pain behind the eyes and rashes This could be because of confusion with similar symptoms in other common viral infections like flu and measles.

Regarding knowledge of transmission of infection only (18.63%) few students correctly responded the causative vector. Majority of students answered as blood transmission and person to person contact(74.51%) were the routes of transmission of infection. These reports are comparable to reports of study conducted by Beatty, M*et al.*in Puerto Rico.[9]This implies more than 80% students who need to be educated about the information regarding disease transmission Aedes aegypti is a day biting mosquito which is answered by only 22.87% of students whereas study conducted in Jamaica only 3% of the people aware about it. So it is necessary to strengthen the knowledge of students for personal protection against mosquito bite. Most of the students responded the personal protective measures like removal of stagnant water around the houses, covering water containers, screening the windows and use of bed nets, use of insecticide sprays and mosquito repellents.

Regarding management like other studies quoted earlier in our study only few students knew about the importance of taking plenty of fluids, rest and restriction of the drug aspirin during dengue infection. Attitudes of students regarding dengue disease is comparable with study conducted in Westmoreland, Jamaica.[2]

Regarding preventive practices in our study almost 60% students practicing window screening, covering water containers, using bed nets and mosquito coils. Remaining 40% of students were not using effective preventive methods; it may

be because of the cost employing these procedures.

From the above it was revealed that knowledge about Dengue fever did not translated into positive attitudes as well as preventive practices. These findings were similar as reports of various studies conducted quoted earlier.[2,6,7]

Conclusion

Our findings suggest that the students had good knowledge about dengue fever but sadly this did not translate to adoption of preventive measures. Campaigns should focus on educating and encouraging youth to adopt simple, inexpensive and preventive actions, such as, use of insecticide treated bed nets and screening of homes.

Recommendations

Our findings highlight the need for further information, education and communication programs in the schools, colleges and community. Campaigns should focus on educating and encouraging youth to adopt simple, inexpensive and preventive actions, such as source reduction activities, use of insecticide treated bed nets and screening of homes. Strengthening of school health educational activities regarding awareness of mosquito control measures and related diseases.

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Table No 1: Socio demographic characteristics of college students.

	Variable	**No**	**%**
Age	17 years	153	50
	18 years	153	50
Sex	Male	193	63.07
	Female	113	36.92
Religion	Hindu	272	88.88
	Muslim	31	10.13
	Others	3	0.98
Education	PUC-1 Science	52	16.99
	PUC-2 Science	65	21.24
	PUC-1 Arts &Commmerce	88	28.75
	PUC-2 Arts&Commerce	101	33.00
Residence	Rural	143	46.73
	Urban	163	53.26
SES	Class 1	5	1.63
	Class 2	73	23.85
	Class 3	86	28.10
	Class 4	90	29.41
	Class 5	52	16.99
Source	Media	204	66.66
	Books	38	12.41
	Meetings	22	7.18
	Others	42	13.72

Table No 2 Knowledge about Dengue fever symptoms among college students

Sl. No	**Variable**	**No. (Percentage)**
1	Fever is a symptom of Dengue fever	258 (84.3%)
2	Headache is a symptom of dengue fever	167 (54.57%)
3	Joint pain is a symptom of dengue fever	154 (50.32%)
4	Muscle pain is symptom of dengue fever	150 (49.01%)
5	Pain behind the eyes is a symptom of dengue fever	144 (47.05%)
6	Rash is a symptom of dengue fever	114 (37.25%)
7	Abdominal pain is a symptom of dengue fever	115 (37.35%)

Table No 3 Knowledge about Dengue fever Transmission among college students

Sl No	VARIABLE	N (%)
1	Flies transmit dengue fever	66 (21.56%)
2	Ticks transmit dengue fever	85 (27.77%)
3	Person to person contact transmit dengue fever	191 (62.41%)
4	Dengue fever be transmitted by a blood transfusion	228 (74.51%)
5	Dengue fever be transmitted by a needle stick	161 (52.61%)
6	Dengue fever be transmitted by a sexual inter course	119 (38.89%)
7	All types of mosquitoes transmit dengue fever	91 (29.74%)
8	The Aedes mosquito transmit dengue fever	57 (18.63%)
9	The dengue mosquitoes bite in day time	70 (22.87%)
10	Removal of standing water can prevent mosquito breeding	249 (81.37%)
11	Covering water containers reduce mosquitoes	208 (67.97%)
12	Windows screens and bed nets can reduce mosquitoes	190 (62.09%)
13	Cutting down bushes can reduce mosquitoes and dengue fever	148 (48.36%)
14	Mosquito repellents prevent mosquitoes	168 (54.90%)
15	Insecticide sprays reduce mosquitoes and prevent dengue	186 (60.78%)
16	Pouring chemicals in standing water can kill mosquito larvae	228 (74.51%)

Table No.4 Knowledge of Management of Dengue fever among college students

SL No	VARIABLE	N (%)
1	Availability of specific treatment for dengue fever	261 (85.29%)
2	Consulting a physician for dengue fever	132 (43.14%)
3	Drinking plenty of water for dengue fever	119 (38.89%)
4	Taking plenty of rest for dengue fever	181 (59.15%)

5	Aspirin use in dengue fever is restricted	105 (34.31%)

Table No 5 Attitude towards dengue fever among college students

	Variables	**Strongly agree**	**Agree**	**Disagree**	**Strongly disagree**	**Not sure**
1	Dengue is a serious illness	42.16 %	27.45%	7.51 %	7.84 %	15.03%
2	You are at risk of getting dengue fever	8.49 %	32.02%	17.97 %	9.48 %	32.02
3	Dengue fever can be prevented	26.79 %	24.83%	16.67 %	7.83 %	23.86%