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Survey on Zika Virus: A New Challenge to Health Care Provider

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ABSTRACT

Background: **Zika virus belongs to the family Flaviviridae which is related with yellow fever and dengue viruses. In 1947 Zika virus was first identified in the Zika forest from a rhesus monkey in Uganda. Evidence of human Zika virus infection was reported in Africa and Asia earlier in humans in Uganda and Nigeria. Almost fourteen cases of Zika virus infections in humans in the past were reported.** ***Aim of study:*** **This study was proposed to assess the awareness of zika virus in our population.** ***Methods and Materials*****: In this research article we conducted a survey to know how many people are aware of this infection in Karachi, Pakistan. We collected our data from 100 students and gave them a open ended questionnaire which contain basic information related with Zika virus. Chi square values were calculated for the analysis. Results: Approximately, 68 % population doesn't know this disease, they don't know basic symptoms and most important issue is treatment, as until no vaccines are discovered.** ***Conclusion:*** **we can conclude according to our study that majority of population don't know zika virus so WHO and health care provider take this issue seriously, takes measure so people can aware of this disease. They should provide training to health care authorities to improve the awareness.**

Keywords: *Zika virus, flavivirus, ZIKV*

INTRODUCTION

Zika virus is a mosquito-borne virus belonging from family Flaviviridae, genre Flavivirus.It was first identified in 1947 (almost 60 year earlier), in rhesus monkey who developed fever in the Zika Forest of Uganda.After that in 1952 it was identified in humans in Uganda. Zikavirus infection have been reported currently in Africa, Americas, Asia and the Pacific[1,2].

Potential complications of Zika virus disease

Healthcare providers reported several case studies of Zika virus indicating possible auto-immune and neurological complications because of this virus. Recently in Brazil, a health care provider has reported the increased number of cases of Guillain-Barré syndrome, now the question may raised that is there any correlation with Zika virus infections, also in other case study it was found that new born babies have increased risk of microcephaly in Brazil [3,4]. Further possible reasons of these cases are still under investigation.

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Signs and Symptoms

Symptoms of zika virus disease are similar to other arbovirus infections such as dengue. The incubation period of Zika virus disease is still indefinite but the possible symptoms are fever, conjunctivitis, joint and pain muscle, skin rashes, malaise and headache. These symptoms are generally not severe and last for 3-7 days.

Transmission

Zika virus is transmitted by the infected mosquito bite of Aedes genus, chiefly Aedesaegypt. There are certain articles which show zika virus is also transmitted by sexual contact [5]. As of February 2016 there are no confirmed cases of Zika virus transmission

through blood transfusions[6].

Diagnosis

Diagnosis of this infection can only be verified by zika virus RNA in the blood or else body fluids, such as urine and saliva. Diagnosis can also achieve by polymerase chain reaction (PCR)tests on acute-level of serum samples, so it can detect viral RNA.In serum Antibody against ZIKV also used to detect specific ANTIBODY. An ELIZA technique i.e. enzyme linked immuno sorbent assay has been also used at the Arboviral Diagnosticto detect immunoglobulin M to ZIKV[7, 8].

Prevention

Prevention depends on avoiding contact between mosquitoes and public. Contact can be reduced by means of insect repellent; covered full body, doors and windows remain closed; and by using mosquito nets Health care authorities may advise that throughout outbreaks, spraying of insecticides be carried out. The U.S. Centers for Disease Control and Prevention (CDC) issued travel guidance strategy in January 2016 on zika virus influenced countries, as well as the use of improved preventative measures, and guiding principle for pregnant women[9].

Treatment

Zika virus infection is generally not severe and requires only symptomatic management. Infected Zika virus patient must increased fluids intake, obtain plenty of rest and take analgesic for relieving of pain and fever. If symptoms get worse, so patient should seek out medical care. As until there is no vaccine available for this virus [10].

METHODOLOGY

In this study a cross-sectional method was used for data collection. A survey was carried outon 50 Pharm.D students and 50 non Pharm.D students that included Commerce, Arts, Computer science, Engineering, etc to determine the awareness of zika virus. Study was conducted from December 2015 to February 2016 in Jinnah University in Karachi. A cross-sectional method was used for data collection based on professional education. Data from 100 students were collected. Data is represented in the form of graphs. Five basic questions were asked from the students to check the awareness of zika virus in students. All 100 students answered the questions.

Statistics

For statistical analysis SPSS version 19.0 for Windows (SPSS Inc. 1989–2010) was used. Chi square test was performed for significance regarding knowledge about Pharm.D student and non Pharm.D students.

RESULT & DISCUSSION

Scientist reported that almost 900 peoples had been sick from Zika virus infection. No deaths were reported. The main symptoms of Zika virus infection were same as dengue like fever, pain or conjunctivitis as well arthralgia in few patients. Females are more affected form this virus as compared to male and older peoples have high risk rates than younger peoples [11]. As zika virus is comparatively new disease and people should be aware of this infection. For this reason we conduct a survey to assess the awareness levels of students belonging to various fields of education.

In this study the first question was asked was,do you know about zika virus,this question was asked from 100 students (50 Pharm. D students and 50 non Pharm.D students) of Jinnah university for women in Karachi, Pakistan. From 50 Pharm.D students, 28 students don't know about zika virus. From 50 non Pharm.D students only 10 students know about this disease while 40 don't know about zika virus as presented in Table 1 and Figure 1. The second question was asked in our survey about the sign and symptom of zika virus. From 50 Pharm.D students, all the 50 students answered this question and 30 students know about symptom

Table: 1

Count				Chi Square
Education	Do you know about zika virus?			0.09
		No	Yes	
	Pharmacist	28	22	
	Non Pharmacist	40	10	
	Total	68	32	
Education	Do you know symptoms of zika virus			0.002
		No	Yes	
	Pharmacist	20	30	
	Non Pharmacist	35	15	
	Total	55	45	
Education	Do you know how to prevent fromzika virus			0.273
		No	Yes	
	Pharmacist	30	20	
	Non Pharmacist	26	24	
	Total	56	44	
Education	Do you know Diagnosis of zika virus			0
		No	Yes	
	Pharmacist	33	17	
	Non Pharmacist	48	2	
	Total	81	19	
Education	Do you know treatment of zika virus			0
		No	Yes	
	Pharmacist	36	14	
	Non Pharmacist	50	0	
	Total	86	14	

of this virus while 20 don't know correct symptom of this virus. From 50 non Pharm.D students 15 students know about symptom while 35 don't know about sign and symptom of zika virus as shown in Table 1 and Figure 2. Results of third and fourth questions indicates insignificant awareness as Chi square values were found to be 0.273 and 0 as shown in Table 1 and Figure 3-4.

The last question was about the treatment of zika virus, and the question was asked from 50 Pharm.D students. Out of 50 students only 14 students know how to treat this disease while 36 students don't know how to treat. While form non Pharm.D student all 50 students don't know how to treat this disease. Chi square value was found to be 0 as presented in Table 1 and Figure 5.

CONCLUSION

We can conclude from our results that majority of population don't know about this virus. WHO and health care provider should take this issue seriously; and should give awareness to

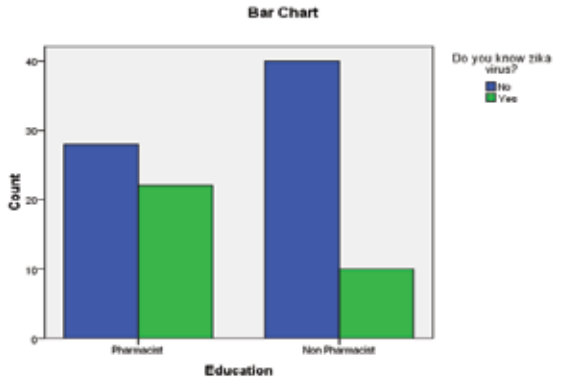

Fig. 1: Do you know about Zika virus?

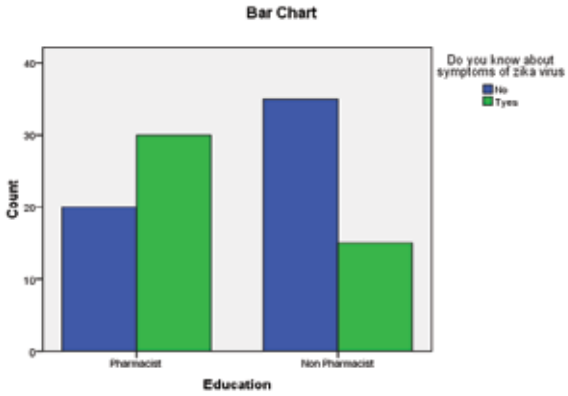

Fig. 2: Do you know symptoms of Zika virus?

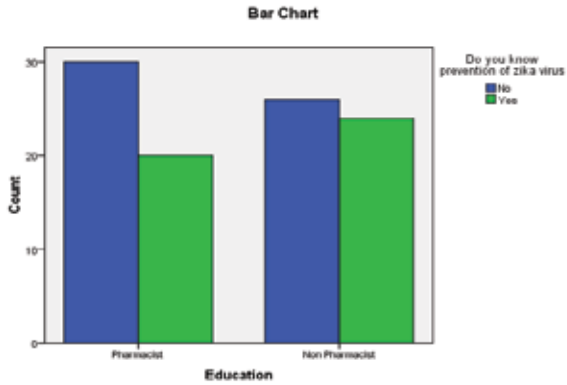

Fig. 3: Do you know how to prevent from this virus?

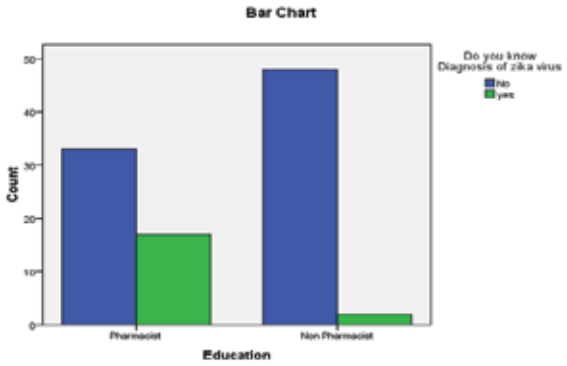

Fig. 4: Do you know how to diagnose this disease?

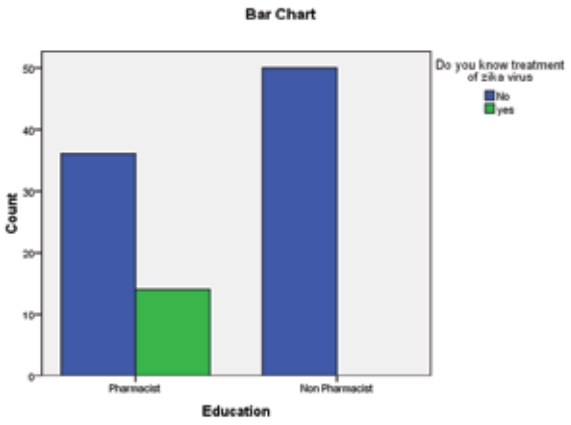

Fig. 3: Do you know how to treat this disease?

the general public. Health care authorities must implement vector control strategies. Clinician and health care providers should conduct seminar to aware our society about this threat.

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