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RESULTS OF THE POPULATION AWARENESS ABOUT DENGUE FEVER

Mirkhamidova Sevara Mirmakhmudovna - assistant

Gokul Ram Selvam - 2 course student

Пьясова Муниса Мирвалиевна - assistant

Israilov Jaxongirxon Djamshidxonovich - assistant

Tashkent Medical Academy. Tashkent, Uzbekistan

Annotation. *Dengue is a highly endemic infectious disease of the tropical countries and is rapidly becoming a global burden. It is caused by any of the 4 types of dengue virus and is transmitted within humans through female Aedes mosquitoes. Dengue disease varies from mild fever to severe conditions of dengue hemorrhagic fever and shock syndrome. One important field of basic research is dengue pathogenesis, the study of the process and mechanisms of dengue in humans. Scientists want to understand how the dengue virus causes damage to the human body and how the immune system responds to a dengue infection so that they can develop new treatment for the disease. Dengue virology, pathogenesis, and immunology and in development of antivirals, vaccines, and new vector-control strategies that can positively impact dengue control and prevention. The impact of its limited application to the public health system needs to be evaluated.*

Keywords: *Dengue fever, mosquito, vaccine, virology, immunology.*

РЕЗУЛЬТАТЫ ОПРОСА ОБ ИНФОРМИРОВАННОСТИ НАСЕЛЕНИЯ О ЛИХОРАДКЕ ДЕНГЕ

Мирхамидова Севара Мирмахмудовна - ассистент

Gokul Ram Selvam - студент 2-го курса

Илясова Муниса Мирвалиевна - ассистент

Исраилов Жахонгирхон Джамшидхонович - ассистент

Ташкентская Медицинская Академия. Ташкент, Узбекистан

Аннотация. *Денге является высокоэндемичным инфекционным заболеванием тропических стран и быстро становится глобальным бременем. Он вызывается любым из 4 типов вируса денге и передается человеку через самок комаров Aedes. Болезнь денге варьирует от легкой лихорадки до тяжелых состояний геморрагической лихорадки денге и синдрома шока. Одной из важных областей фундаментальных исследований является патогенез лихорадки денге, изучение процесса и механизмов лихорадки денге у людей. Ученые хотят понять, как вирус денге наносит ущерб человеческому организму и как иммунная система реагирует на инфекцию денге, чтобы разработать новое лечение этой болезни. Вирусология, патогенез и иммунология лихорадки денге, а также в разработке противовирусных препаратов, вакцин и новых стратегий борьбы с переносчиками, которые могут положительно повлиять на контроль и профилактику лихорадки денге. Необходимо оценить влияние его ограниченного применения на систему общественного здравоохранения.*

Ключевые слова: *лихорадка денге, комар, вакцина, вирусология, иммунология.*

AHOLINI DENGA ISITMASI HAQIDAGI XABARDORLIGI HAQIDAGI SO‘ROVNOMA NATIJALARI

Mirkhamidova Sevara Mirmakhmudovna - assistent

Gokul Ram Selvam - 2-bosqich talabasi

Ilyasova Munisa Mirvaliyevna - assistent

Israilov Jaxongirxon Djamshidxonovich – assistant

Toshkent Tibbiyot Akademiyasi. Toshkent, O‘zbekiston

***Annotatsiya.** Dengra tropik mamlakatlarning o‘ta endemik yuqumli kasalligi bo‘lib, tezda global yukga aylanib bormoqda. Bu dang virusining 4 turidan har qandayidan kelib chiqadi va Aedes chivinlari orqali odamlarga yuqadi. Dengra kasalligi engil isitmada dang gemorragik isitmasi va shok sindromining og‘ir holatlarigacha o‘zgaradi. Asosiy tadqiqotlarning muhim sohalaridan biri bu dang patogenezi, odamlarda dang kasalligi jarayoni va mexanizmlarini o‘rganish. Olimlar Dengra virusi inson tanasiga qanday zarar yetkazishini va immunitet tizimining Dengra infeksiyasiga qanday javob berishini tushunishni istashadi, shunda ular kasallik uchun yangi davolash usullarini ishlab chiqishlari mumkin. Dengra virusologiyasi, patogenezi va immunologiyasi, shuningdek, virusga qarshi vositalar, vaksinalar va yangi vektorlarni nazorat qilish strategiyalarini ishlab chiqishda Dengaga qarshi kurash va oldini olishga ijobiy ta‘sir ko‘rsatishi mumkin. Uning cheklangan qo‘llanilishining sog‘liqni saqlash tizimiga ta‘sirini baholash kerak.*

***Kalit so‘zlar:** dengra isitmasi, chivin, vaksina, virusologiya, immunologiya.*

Introduction. Dengue viruses have spread rapidly within countries and across regions in the past few decades, resulting in an increased frequency of epidemics and severe dengue disease, hyperendemicity of multiple dengue virus serotypes in many tropical countries, and autochthonous transmission in Europe and the USA. Today, dengue is regarded as the most prevalent and rapidly spreading mosquito-borne viral disease of human beings. Importantly, the past decade has also seen an upsurge in research on dengue virology, pathogenesis, and immunology and in development of antivirals, vaccines, and new vector-control strategies that can positively impact dengue control and prevention [1,6].

Globalization, increased air travel, and unplanned urbanization have led to increase in the rate of infection and helped dengue to expand its geographic and demographic distribution. Dengue vaccine development has been a challenging task due to the existence of four antigenically distinct dengue virus serotypes, each capable of eliciting cross-reactive and disease-enhancing antibody response against the remaining three serotypes. Recently, Sanofi Pasteur's chimeric live-attenuated dengue vaccine candidate has been approved in Mexico, Brazil, and Philippines for usage in

adults between 9 and 45 years of age. The impact of its limited application to the public health system needs to be evaluated. Simultaneously, the restricted application of this vaccine candidate warrants continued efforts in developing a dengue vaccine candidate which is additionally efficacious for infants and naïve individuals. In this context, alternative strategies of developing a designed vaccine candidate which does not allow production of enhancing antibodies should be explored, as it may expand the umbrella of efficacy to include infants and naïve individuals [2,7].

Dengue causes a spectrum of illness from mild fever to severe disease with plasma leakage and shock. Infants and children with secondary heterologous dengue infections are most at risk for severe dengue disease. Laboratory diagnosis of dengue can be established within five days of disease onset by direct detection of viral components in serum. After day five, serologic diagnosis provides indirect evidence of dengue. Currently, no effective antiviral agents are available to treat dengue infection. Therefore, treatment remains supportive, with emphasis on close hematological monitoring, recognition of warning signs of severe disease and fluid-replacement therapy and/or blood transfusions when required. Develop-

ment of a dengue vaccine is considered a high public health priority. A safe and efficacious dengue vaccine would also be important for travellers. This review highlights the current understanding of dengue in children, including its clinical manifestations, pathogenesis, diagnostic tests, management and prevention [3].

The clinical manifestations of dengue are the expression of a constellation of host and viral factors, some acquired, others intrinsic to the individual. The virulence of the virus plus the flavivirus infection history, age, gender and genotype of the host all appear to help shape the severity of infection. Similarly, the characteristics of the innate and acquired host immune response subsequent to infection are also likely determinants of outcome. This review summarises recent developments in the understanding of dengue pathogenesis and their relevance to dengue vaccine development [4]

Early and accurate diagnosis is important for guiding appropriate management and for disease surveillance to guide prompt dengue control interventions. However, major uncertainties exist in dengue diagnosis and this has important implications for all three. Dengue can be diagnosed clinically against predefined lists of signs and symptoms and by detection of dengue-specific antibodies, non-structural 1 antigen or viral RNA by reverse transcriptase-polymerase chain reaction. All of these methods have their limitations [5].

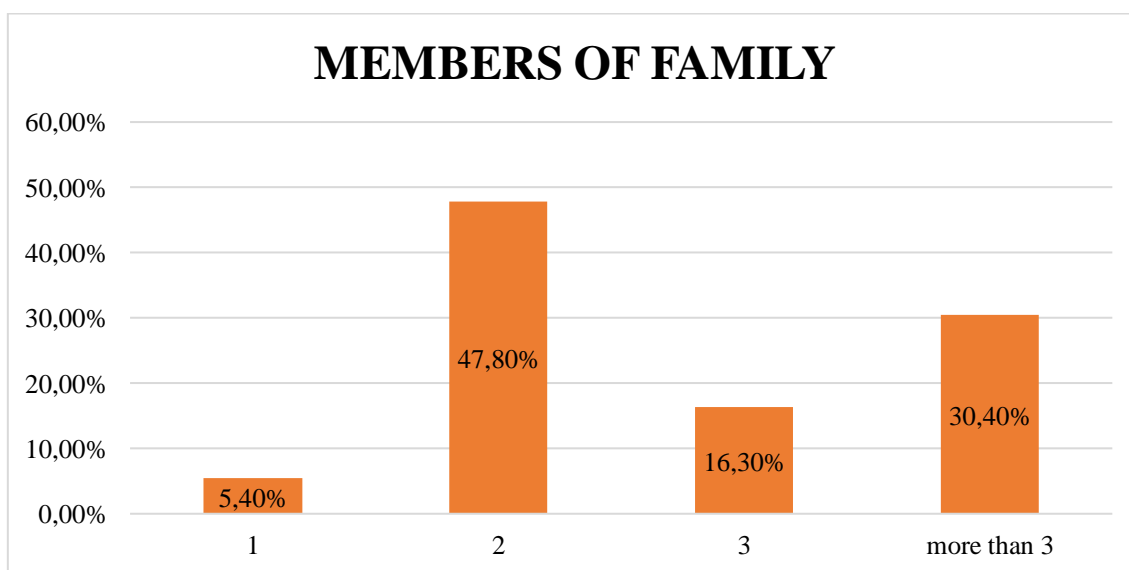
Materials and method.

This study used an online Google Form questionnaire as the instrument. Invitation to participate in this survey was sent through the email and social media such as Instagram. The questionnaire was distributed in this way because each of the participants has his or her personal email account and most of them have their own Instagram account as well. Therefore, using online Google Form to reach each participant is the best choice.

The target respondents are the people who are in India and Uzbekistan that most of them are students. The questions in the developed questionnaire were distributed for this pilot to test the awareness of dengue fever. The population of this survey was **95** members. Among 95 responses, 3 sets of responses were incomplete. This work is done to create a awareness on the dengue fever and its vaccine. The **search for literary sources** was carried out using the bibliographic databases of some articles from PubMed. When selecting sources, they paid attention to experimental articles, literary reviews, The number of their citations over the past year.

Results.

The survey were conducted using information and communication technologies, like Google forms All were asked to answer using a specially designed public awareness on Dengue fever questionnaire. The table below show the results of the survey. People of about 95 were under survey.



Awareness on the vector borne disease – Dengue Fever (Result of the survey)

No.	QUESTIONS	YES	NO
1.	Do you have stagnant water bodies and poor drainage system in your locality?	45.7%	54.3%
2.	Do you use refrigerator and air conditioner in your home which are the places where mosquito can lay eggs?	45.7%	54.3%
3.	Do you have mosquito issues especially in morning?	29.3%	70.7%
4.	Is your house protected by mosquito nets?	62%	38%
5.	Do you get proper mosquito foaming in your area?	45.1%	54.9%
6.	Is your home surrounded by shrubs and garbage where fresh water can stag that will be helpful for mosquito?	57.1%	42.9%
7.	Is anybody in your house affected by dengue fever already?	48.9%	51.1%
8.	Do you have open top storage water tank in your house?	37%	63%

❖ As per survey the stagnant water bodies and poor drainage systems are comparatively less.

❖ As the result of industrialization and globalization most of the people in India and Uzbekistan are using refrigerator and air conditioner which will cause mosquito to breed.

❖ There was no problem of mosquito issues in morning because Aedes mosquito only bites in morning

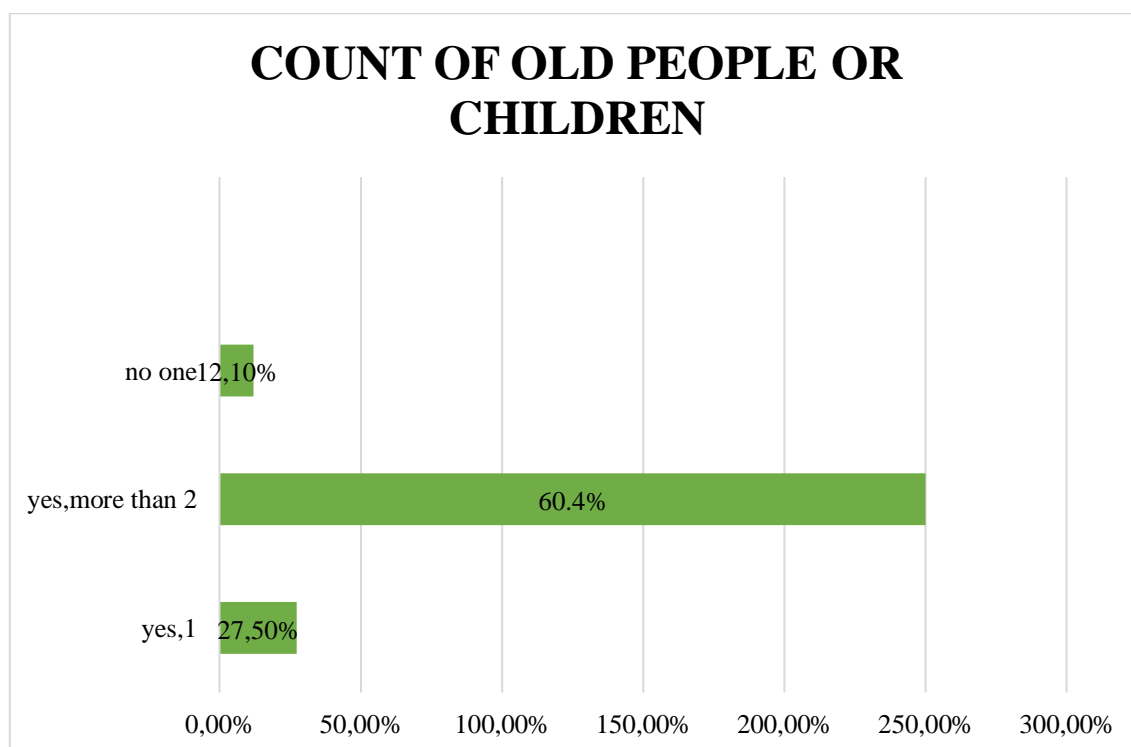
❖ As the result of survey most of the people are using mosquito nets so they were less prone to dengue fever.

❖ It is surprised that the places in India and Uzbekistan where mosquito foaming is less so the government organisation should improve the technique.

❖ Most of the areas are surrounded by shrub and garbage which is congested that may cause mosquito to easily breed.

❖ As per result the people are equally affected and not affected by dengue fever.

❖ Most of the houses in India and Uzbekistan are having open water storage tank which is more dangerous that may cause other water borne disease also.



Since the count of old people or children is more than 2 we should be more aware about the vector borne disease – Dengue Fever

Discussion.

Although the response rate is good but there has several argued points in this survey. The respondents answer in the survey might be not the answers that expected. The main thing about dengue fever is this disease which is caused by *Aedes mosquito*. Many people among thus survey is not aware of about this fever. The quality of their surrounding is not well and its suitable for the mosquito breeding. On the contrary the mosquito needs fresh stagnant water for breeding. The dengue fever is a fatal in way that cause platelet destruction. The expected result has changed due to the poor awareness about dengue fever among people who live in India and Uzbekistan.

Conclusion.

As an objective of this survey, this paper presented as to create and identify the awareness of dengue fever which is caused by mosquito. Most of the people who attend this survey is family members. They were not aware of dengue fever so the government should take some kind of awareness about this disease. They should provide sanitary workers for regular checking of area to eradicate mosquito breeding. The garbage management should be properly managed. The government should provide proper foaming to the respective localities. If any person already affected by dengue fever, they should be properly isolated and well medicated. People should know the correct symptoms of this disease because mild symptoms of dengue can be confused with other illness that cause fever, aches and pains, or a rash. The most important thing which cause dengue is more fatal that there is no specific medicine to treat dengue. About one in four people infected with dengue will get sick. About 1 in 20 people who get sick with dengue will develop severe dengue. Severe dengue can result in shock, internal bleeding and even death. The conclusion of this article is to create proper awareness among people and to reduce death rate due to dengue fever.

Acknowledgement.

Thus the awareness of dengue fever must be carried out in the following areas:

- Prevent mosquito breeding by proper foaming method.
- Create proper awareness among people.
- Covering of house with mosquito nets.
- Cleaning of refrigerator and air conditioner on regular interval
- Closing the open water tank and prevent water stagnation.

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