

Effectiveness of health screening program in chronic communicable diseases - Dengue Fever

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ABSTRACT

Dengue is an acute viral illness caused by an RNA virus and spread by aedes mosquito. These features may range to haemorrhage fever and shock. Oral manifestations are rare in dengue infections, in some cases may have oral features as the only presenting manifestation. The dengue virus infections are usually self-limiting, dengue infection has come up as a public health challenges in the tropical and subtropical nations. This article provides information on dengue fever types, causes, symptoms, health screening programs, treatment, and epidemiology survey about dengue fever in India. As dengue fever is increasing in India, it is very essential to know more about this disease pattern, early detection of the virus and management will result in good recovery. Measures should be taken to control and prevent the disease spread. The physician should be aware about varied signs and symptoms of those conditions and ensure an early and adequate treatment plan. Future directions to combat this dreadful disease aim at method of mosquito control, development of vaccines and People should be aware of some seasonal diseases and prevention methods.

Key words:

Dengue virus, analytical phase, diagnosis, chronic diseases, Clinical pathology, aedes aegypti.

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INTRODUCTION:

Screening means most people take part in screening in order to be reassured they are healthy, rather than with the expectations they are not. Screening does not give a diagnosis. Screening divides people into two groups, people who have an increased chance of having the condition (positive screening result) and people who do not have an increased chance of having the condition (negative screening result). People with positive screening test will get for diagnosis test, which will give further information about the condition which they have now. Depending on the type of screening, they may be invited to come back for screening at a later date¹.

Screening programs have a long and distinguished history in an effort to control epidemic of infectious diseases and targeting treatment for chronic communicable diseases. As the screening program have been implemented over many years a substitution experienced body has been obtained². Chronic condition means it is a human health condition or disease that is long lasting in its effect³. Communicable disease is one that spreads from one person to another through a variety of ways it includes; contact with blood and body fluids, breathing in an airborne virus, being bitten by an insect. Dengue fever is a mosquito borne tropical diseases caused by the dengue virus. Its symptoms typically begin three to fourteen days after infection. It may include a high fever, headache, vomiting, muscle and joint pains, and skin rash. It spared by animals or insects, requires a medical diagnosis, lab tests are often required, if it is critical it needs emergency care.

Dengue develops in urban poor areas, suburbs and countryside but also affects more affluent neighborhood in tropical and subtropical countries. Severe dengue previously known as

Dengue haemorrhagic fever was first recognised in the 1950s during dengue spreads widely in the Philippines and Thailand. Today it affects Asian and Latin Americans and has become a leading cause of hospitalization and death among children and adults in these regions⁴. The full life cycle of dengue fever virus involves the role of mosquito as transmitter and humans as the main victims and source of infection. The aedes aegypti mosquito is the main vector that transmits the virus that causes dengue, the virus are passed onto humans through bites of inactive female aedes mosquito, which mainly acquired the virus while feeding on the blood of an infected person.



Fig no: 01 Aedes aegypti mosquito

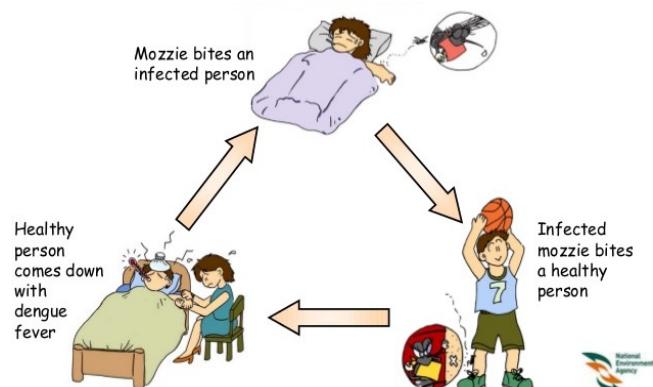


Fig no: 02 Aedes mosquitoes transmit diseases

SCREENING FOR DENGUE FEVER:

Dengue fever is a mosquito borne tropical disease caused by the dengue virus. Symptoms begin from 3-14 days. It may include a high fever, headache, vomiting, muscle, and joint pains, and characteristic skin rashes.

Since the 1990s, epidemic of dengue have become more frequent in many parts of India. Over the period 1998-2009, 82,327 dengue cases were reported. During a more recent period 2010-2014, 2, 13,607 dengue fever were observed. Thus, the number of dengue cases during the past 5 years has increased markedly, with respect to the 1998-2009⁵. From past few years the highest dengue incidences was reported in Pondicherry (372.92), followed by dadra nagar haveli (176.31) and Delhi (102.15). High dengue incidences, ranging between 21 and 50 per million, was reported for the states of Punjab, Karnataka, Gujarat, Kerala, tamilnade, Orissa.

There are four serotypes DENV-1, DENV-2, DENV-3 and DENV-4. The virus is transmitted to humans through the bite of mosquitoes of genus aedes (5). DENV causes a wide spectrum of clinical manifestations, from dengue fever to dengue hemorrhagic fever, which may progress to dengue shock syndrome⁶.

The definite diagnosis of dengue infection has to be based on the laboratory investigation. Quality control of the laboratory investigation is the main point to derive the most useful laboratory results for patient management. In general, error in laboratory analysis is a common occurrence in laboratory medicine. This is an important issue to be discussed when considering aspects of clinical pathology. There are two kinds of errors, they are systematic and randomized.

Systematic errors refer to errors that are caused by the system itself, which therefore affects all analysis. Randomized error refers to error that is caused by accident or by episodic change. Unlike systematic error, randomized error does not affect some, but not all, analysis. The errors are occurred in preanalytical phase, analytical phase, post analytical phase, preanalytical phase, and post analytical phase⁷.

TREATMENT:

Dengue fever didn't have any specific medication to treat. But if you have a specific symptoms as we mentioned above you should use pain relievers with acetaminophen and avoid medicines with aspirin, which may worsen bleeding. They should also rest, drink plenty of fluids and should a doctor. If the patient starts feeling worse in the first 24 hours after your fever goes down, they should get to a hospital immediately to be checked for complications⁸.

AWARENESS ABOUT THE TREATMENT:

People should be aware of some seasonal diseases and prevention methods to prevent the attack of that disease to them, the best way to prevent the disease is to prevent mosquito bites by infectious mosquitoes, particularly if you are living in a topical area. This involves protecting yourself and making efforts to keep the mosquito population down.

In 2019, the FDA approved a vaccine called dengvaxia to help prevent the disease from occurring in adolescence aged 9 to 16 who have already been infected by dengue. There are no vaccines to prevent the general population from contracting it.

Prevention methods for dengue fever; use mosquito repellent, wearing long sleeved shirts and long pants tucked into socks, make sure windows and doors are secure and free of holes, if sleeping areas are not screened or air conditioned, use mosquito nets, avoid scents, removing stagnant water can help reduce the risk, still people were suffering with dengue symptoms then consult your doctor.

If someone in your home gets dengue fever, be especially careful about them, yourself and other family members from mosquitoes. Mosquitoes that bite the infected family member could spread the infection to other in your home

CONCLUSION:

Dengue is a life threatening public health concern, affecting around 2.5 billion individuals in more than 100 countries. Now it has become as one of the dangerous diseases in our country, over the period 1998-2009, 82,327 dengue cases were reported. The physician should be aware about varied signs and symptoms of those conditions and ensure an early and adequate treatment plan. Future directions to combat this dreadful disease aim at method of mosquito control, development of vaccines and People should be aware of some seasonal diseases and prevention methods.

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