

## Short Communication



# A Descriptive Study of Dengue Patients Hospitalized in District Head Quarter Hospital Timergara Dir (Lower), Pakistan

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**Abstract** | Dengue fever is a viral disease and transmitted by *Aedes aegypti*. In Pakistan dengue is an epidemic since last twenty years. The current study was conducted to determine the frequency of dengue fever. A descriptive study was design (September-October, 2011). A total of 15 male dengue patients were admitted (mean age 35.5 years). All the patients were seropositive (IgM). High number of cases (53.33%) was recorded in age between 15-30 years. The traveling history shows that maximum number of individuals (86.66%) was infected in Lahore. Actively transmission of dengue infection is alarming signal for health authorities.

**Keywords** | Dengue fever, Descriptive study, *Aedes aegypti*

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Dengue fever is cause by dengue virus. Dengue virus belongs to family *flaviviridae* of the genus *flavivirus*. The dengue virus possesses four different serotypes, DEN1 to DEN4; within which are several genotypes. The virus has three structural proteins known as core, membrane and envelope and 7 non-structural (NS1, NS2a, NS2b, NS3, NS4, NS4b, and NS5) proteins (Raja, 2009). One dengue virus provides long life immunity, so there is no cross protective immunity to other viruses, therefore all dengue viruses can easily effect the populations in endemic regions. Dengue virus is transmitted by *Aedes aegypti*. The *A. aegypti* mosquito present domestically, black in colour with white spots. The insect gives preference to human for feeding. There are two crests of biting action; early morning for 2 to 3 hours and in the afternoon for several hours before dark. It lay egg in artificial containers. Female *A. aegypti* feeds on several persons and may transmit dengue virus to many persons in short time (Raja, 2009).

Dengue fever disease frequently symptomize by bone, joint and muscular pains, headaches rashes and leucopenia. It is also familiar as bone break fever (Gubler

and Mahy, 2010). Dengue hemorrhagic fever is categorized by 4 main clinical indices: high fever, hemorrhagic sensations, mostly hepatomegaly and in stark cases, failure of circulation. Such patients may progress hypovolaemic shock causing from plasma leakage. This is called dengue shock syndrome, which is the danger condition (WHO, 2009a). Dengue hemorrhagic fever is public health problem in the tropical areas of the South-East Asia and Western Pacific Regions. The disease is among the ten top causes of hospitalization and death in children in at least eight tropical Asian countries (WHO, 2010).

According to World Health Organization (WHO), about 50 to 100 million cases of dengue fever and 500,000 cases of Dengue Hemorrhagic Fever are stated yearly along with 24,000 deaths (WHO, 2009b). The dengue fever is endemic to more than hundred countries. Southeast and the Western Pacific are the more affected regions of the world. It is declared by WHO that dengue fever is endemic in South Asia. In 2007 more than 0.89 million peo-

ple with dengue fever were reported, in which 26 hundred were Dengue hemorrhagic fever cases. The most affected region of the world for dengue fever is Asia and Pacific region followed by America, Africa and Middle East. In Pakistan dengue is epidemic since last twenty years. The first epidemic case was observed in 1994. High number of cases was noticed in 2011 in Lahore (Ahmad, 2013).

This study was conducted to determine the frequency of dengue fever at District Head Quarter Hospital Timergara Dir (Lower), Khyber Pakhtunkhwa, Pakistan. A descriptive study was design during the month of September and October, 2011. The ethical approval was obtained from the higher authority of hospital for approaching to patients. Each patient was interviewed. A special questionnaire was filled from each patient. The questionnaire includes the information about age, sex, address, occupation, traveling history etc. Age of the patients was between 23 to 60 years with mean age 35.5 years. All patients were male with their occupation being labour.

A total of 15 dengue patients were admitted. On the basis of age wise distribution high number of cases 8 (53.33%) was recorded in age between 15-30 years followed by 4 (26.67%) in age between 31-45 years and 3 (20%) in age 40-60 years. Traveling history of the patients shows that 13 (86.66%) individuals were infected in Lahore, 1 (6.67%) was infected in Rawalpindi and 1 (6.67%) was infected in Dir (Lower). Most of the patients 10 (66.67%) were admitted in the month of October while in the month of September 5 (33.33%) patients were admitted.

Dengue is most widely and rapidly spreading disease in the current time. The WHO is concerned about it becoming an international public health problem in the absence of suitable and active involvement (Phillips, 2008). A study conducted by Ahmad et al. (2015) reported high number of cases in male population as compare to female. Another study carried out by Mukhtar et al. (2012) at Lahore reported 78 (72%) cases were IgM positive, mostly were males and maximum number of cases were reported in age between 16 to 50 years. According to our finding most of the patients were infected in Lahore which is correlated with the study of Mukhtar et al. (2012). It is very strong evidence that Lahore is the endemic region for dengue. A study conducted in Saudi Arabia by Khormi et al. (2011) showed similar results stating that individuals between the age of 16 and 60 years were more affected by dengue fever. Mahmood et al. (2009) conducted a study in local population of Lahore to determine the prevalence of dengue fever. Among the 341 acute cases, 166 (48.7%) were confirmed by IgM positive, 27 (7.9%) in grey zone and 148 (43.4%) were negative. Male to female ratio was 1.25:1. More prevalence has been observed in old age (37.8%) as compared to children (7.1%) in age group 1-15 years. Dengue infec-

tion actively transmitted which is an alarming signal for health authorities.

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## CONFLICT OF INTEREST

The authors have no conflict of interest regarding publication of this manuscript.

## AUTHOR'S CONTRIBUTION

NU: Collected the data, wrote the manuscript. TA: Study design, wrote the manuscript and analyzed the data. Both the authors contributed equally.

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