PREVALENCE OF DENGUE IN DIFFERENT TERTIARY CARE HOSPITALS

AUTHORS:
1- DR MUHAMMAD NOUMAN FAHEEM, AZIZ FATIMAH TRUST HOSPITAL, FAISALABAD.
2- DR. ABDUL WAHAB, FEDERAL MEDICAL AND DENTAL COLLEGE
3- DR. MUBASHIR HASSAN, FEDERAL MEDICAL AND DENTAL COLLEGE ISLAMABAD

Corresponding Author:
Dr. Muhammad Nouman Faheem
Aziz Fatimah Trust Hospital Faisalabad,
nouman.bhatti@hotmail.com

Cite this article as:

ABSTRACT:
The incidence of dengue has grown dramatically around the world in recent decades. A vast majority of cases are asymptomatic or mild and self-managed, and hence the actual numbers of dengue cases are under-reported. This cross-sectional study was conducted in outdoor and indoor departments of different tertiary care hospitals. All the patients presenting with history of fever, body aches were included in this study. A total of
300 patients were included in this study. All the patients were labelled as suspected. Out of three hundred, one hundred and fifty-eight were labelled as probable. After following up, one hundred and one patients were labelled as dengue confirm patient.

**Keywords:** Dengue, tertiary care hospitals.

**INTRODUCTION:**
The incidence of dengue has grown dramatically around the world in recent decades. A vast majority of cases are asymptomatic or mild and self-managed, and hence the actual numbers of dengue cases are under-reported. Many cases are also misdiagnosed as other febrile illnesses.

One modelling estimate indicates 390 million dengue virus infections per year (95% credible interval 284–528 million), of which 96 million (67–136 million) manifest clinically (with any severity of disease). Another study on the prevalence of dengue estimates that 3.9 billion people are at risk of infection with dengue viruses. Despite a risk of infection existing in 129 countries, 70% of the actual burden is in Asia. The number of dengue cases reported to WHO increased over 15 fold over the last two decades, from 505,430 cases in 2000 to over 2,400,138 in 2010 and 3,312,040 in 2015. Deaths
from 2000 to 2015 increased from 960 to more than 4032 (1,2).

This alarming increase in case numbers is partly explained by a change in national practices to record and report dengue to the Ministries of Health, and to the WHO. But it also represents government recognition of the burden, and therefore the pertinence to report dengue disease burden. Therefore, although the full global burden of the disease is uncertain, this observed growth only brings us closer to a more accurate estimate of the full extent of the burden.

The virus is transmitted to humans through the bites of infected female mosquitoes, primarily the Aedes aegypti mosquito. Other species within the Aedes genus can also act as vectors, but their contribution is secondary to Aedes aegypti. After feeding on an DENV-infected person, the virus replicates in the mosquito midgut, before it disseminates to secondary tissues, including the salivary glands. The time it takes from ingesting the virus to actual transmission to a new host is termed the extrinsic incubation period (EIP). The EIP takes about 8-12 days when the ambient temperature is between 25-28°C. Variations in the extrinsic incubation period are not only influenced by ambient temperature; a number of factors such as the magnitude of daily temperature fluctuations, virus genotype, and initial viral concentration can also alter the time it takes for a
mosquito to transmit virus. Once infectious, the mosquito is capable of transmitting virus for the rest of its life (3,4).

**MATERIAL AND METHODS:**
This cross-sectional study was conducted in outdoor and indoor departments of different tertiary are hospitals. All the patients presenting with history of fever, body aches were included in this study. Brief history of the patients i.e. name, age, gender, and date of onset of symptoms was taken. Demographic data and laboratory data were collected. All the data was collected on a predefined proforma. The data was entered and analyzed in MedCalc software. Relevant statistical analysis was performed. The qualitative variables were presented as frequency and percentages. The quantitative variables were presented as mean and standard deviation.

**RESULTS:**
A total of 300 patients were included in this study. There were 140 (46.66%) females and 160 (53.33%) males in this study. The mean age of the patients was 34.23±4.34 years, mean age of the females was 32.54±2.12 years and mean age of males was 35.45±1.45 years. All the patients were labelled as suspected. Out of three hundred, one hundred and fifty-eight were labelled as
probable. After following up, one hundred and one patients were labelled as dengue confirm patient.

![Gender Pie Chart]

- Male: 47%
- Female: 53%

![No. of Patients Bar Chart]

- Suspected: 300
- Probable: 158
- Confirm: 101
DISCUSSION:
The characteristic symptoms of dengue are sudden-onset fever, headache (typically located behind the eyes), muscle and joint pains, and a rash. An alternative name for dengue, "breakbone fever", comes from the associated muscle and joint pains. The course of infection is divided into three phases: febrile, critical, and recovery.

The febrile phase involves high fever, potentially over 40 °C (104 °F), and is associated with generalized pain and a headache; this usually lasts two to seven days. Nausea and vomiting may also occur. A rash occurs in 50–80% of those with symptoms in the first or second day of symptoms as flushed skin, or later in the course of illness (days 4–7), as a measles-like rash. A rash described as "islands of white in a sea of red" has also been observed. Some petechiae (small red spots that do not disappear when the skin is pressed, which are caused by broken capillaries) can appear at this point, as may some mild bleeding from the mucous membranes of the mouth and nose. The fever itself is classically biphasic or saddleback in nature, breaking and then returning for one or two days.

In some people, the disease proceeds to a critical phase as fever resolves. During this period, there is leakage of plasma from the blood vessels, typically lasting one to
two days. This may result in fluid accumulation in the chest and abdominal cavity as well as depletion of fluid from the circulation and decreased blood supply to vital organs. There may also be organ dysfunction and severe bleeding, typically from the gastrointestinal tract. Shock (dengue shock syndrome) and hemorrhage (dengue hemorrhagic fever) occur in less than 5% of all cases of dengue; however, those who have previously been infected with other serotypes of dengue virus ("secondary infection") are at an increased risk. This critical phase, while rare, occurs relatively more commonly in children and young adults.

The recovery phase occurs next, with resorption of the leaked fluid into the bloodstream. This usually lasts two to three days. The improvement is often striking and can be accompanied with severe itching and a slow heart rate. Another rash may occur with either a maculopapular or a vasculitic appearance, which is followed by peeling of the skin. During this stage, a fluid overload state may occur; if it affects the brain, it may cause a reduced level of consciousness or seizures. A feeling of fatigue may last for weeks in adults (5-8).

REFERENCES: