Anxiety and depression in patients of dengue fever

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Objective
To assess anxiety and depression in hospitalized patients of dengue fever.

Patients and Methods
This cross-sectional descriptive study was conducted in the especially established general public ward for dengue fever patients at combined military hospital (CMH) Lahore from September to November 2011. Ninety seven patients were selected conveniently. Written informed consent was obtained. Hospital Anxiety & Depression Scale (HAD Scale) Urdu version was used for data collection.

Results
Of 97 patients, mean age was 35.8 years and 35 (36%) were males and 62 (64%) females. 26 (26.8%) had mild, 38 (39.2%) had severe anxiety, while 33 (34%) were normal. Out of 97 patients 34 (35.1%) had mild, 45 (46.4%) had severe depression and 18 (18.6%) had no depression.

Conclusion
More than half of the patients (66%) in this study were suffering from anxiety and more than three fourth (81.5%) of the patients were suffering from depression. Recognition of these problems in patients of dengue fever is of fundamental importance in their management. The quality of life may be improved in such patients with treatment by a psychiatrist. (Rawal Med J 2012;37:239-242).

Key Words
Dengue Fever (DF), Hospital Anxiety & Depression Scale (HAD Scale), dengue shock syndrome (DSS).

INTRODUCTION
Dengue fever (DF) also known as break-bone fever is an infectious tropical disease caused by the dengue virus. The alternative name for dengue, "break-bone fever", comes from the associated muscle and joint pains. The term dengue fever came into general use only after 1828. The first record of a case of probable DF is in a Chinese Medical Encyclopedia from the Jin Dynasty (265420 AD) which referred to a "water poison" associated with flying insects. Dengue is transmitted by several species of mosquito within the genus Aedes, principally A. aegypti.

More than 2.5 billion in over 112 countries of the world are at risk from dengue virus. According to WHO, more than 100 million new cases of DF occur worldwide including dengue hemorrhagic fever (500,000) and dengue shock syndrome (DSS) with 2.5% mortality rate. Typically, people infected with dengue virus are asymptomatic (80%) or only have mild symptoms such as an uncomplicated fever. Others have more severe illness (5%), and in a small proportion it is life-threatening. The incubation period ranges from 3-14 days, but most often it is 4-7 days. Therefore, travelers returning from endemic areas are unlikely to have dengue if fever or other symptoms start more than 14 days after arriving home. Children often experience symptoms similar to those of the common cold and gastroenteritis. 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. The recovery phase occurs next, with resorption of the leaked fluid into the bloodstream. During this stage, a fluid overload may occur; if it affects the brain, it may cause a reduced level of consciousness or seizures. Dengue Fever is increasingly becoming an epidemic in Pakistan and first reported epidemic of DF occurred in 1994. Due to increase in artificial collection of water and floods, the disease spread more rapidly in 2011 than in previous years. It has
attracted the attention of the Government of Pakistan, especially the Punjab Government, since it was widespread in that province. During 2011, it killed over 300 people and over 14,000 were infected by this disease. In this problem the Pakistan Armed Forces were also involved in the fight to control dengue. They were actively engaged in increasing public awareness and set up 300 camps in Lahore for relief. The aim of this study was to assess anxiety and depression in hospitalized patients of dengue fever.

**PATIENTS AND METHODS**

This Cross-sectional descriptive study was carried out at the general public ward for dengue fever patients at CMH Lahore from September 2011 to November 2011. Patients from all age groups and social classes were included in study sample. Only confirmed cases of DF were included who were hospitalized and had no other underlying physical illness. Patients with past history of psychiatric illness, intracranial tumors and those with febrile illness having effects of drugs that could impair their ability to participate in the study were excluded. All patients were selected through non probability convenient sampling technique from admitted patients. Informed consent was obtained from all participants. Demographic data, present or past history of psychiatric illness and family history of psychiatric illness were recorded. Other variables like recent life events, vulnerable personality traits, socioeconomic status and family system, were also recorded.

An Urdu version of Hospital Anxiety and Depression Scale (HAD Scale), a self assessment scale was used. It aims to determine risk groups by rapidly screening anxiety and depression in patients with physical illness. Diagnosis of psychiatric morbidity was obtained by manual methods i.e. from the scores achieved by the patients in HAD scale. All the data was entered into the computer and descriptive statistics were calculated by using computer software SPSS-16.

**RESULTS**

Total patients were 97 with mean age of 35.8 years. There were 35 (36%) male with mean age 33.4 years and 62 (64%) female with mean age 37.1 years.

Table 1. Frequency of HAD scoring of anxiety among patients (n=97).

<table>
<thead>
<tr>
<th>Anxiety grades and scores</th>
<th>Number</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Normal not anxious (0-7)</td>
<td>33</td>
<td>34</td>
</tr>
<tr>
<td>Mild anxiety (8-10)</td>
<td>26</td>
<td>26.8</td>
</tr>
<tr>
<td>Severe anxiety (11 and above)</td>
<td>38</td>
<td>39.2</td>
</tr>
<tr>
<td>Total</td>
<td>97</td>
<td>100.0</td>
</tr>
</tbody>
</table>

Under Matric were 39.2% and above Matric were 60.8%.

Table 2. Frequency of HAD scoring of depression among patients (n=97).

<table>
<thead>
<tr>
<th>Depression grades and scores</th>
<th>Number</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Normal not depressed (0-7)</td>
<td>18</td>
<td>18.6</td>
</tr>
<tr>
<td>Mildly depressed (8-10)</td>
<td>34</td>
<td>35.1</td>
</tr>
<tr>
<td>Severely depressed (11 or above)</td>
<td>45</td>
<td>46.4</td>
</tr>
<tr>
<td>Total</td>
<td>97</td>
<td>100.0</td>
</tr>
</tbody>
</table>

Anxiety was most common in males above 40 years (Fig 1), whereas depression was almost equally common in both males and females above 40 years (Fig 2).

Fig 1. Comparision of anxiety in male and females.
CONCLUSION
Our study results show that percentage of anxiety and depression was high in DF patients. More than half of the patients (66%) were suffering from anxiety and more than three fourth (81.5%) of the patients were suffering from depression. The gender difference showed that anxiety in male patients was 74.3% compared to 61.3% of female patients. Depression was slightly more frequent in females (82.3%) as compared to males (80%). Anxiety and depression which are often omitted by patients and their family are overlooked and neglected by the physicians as well. Psychiatric assessment of patients suffering from DF and initiation of appropriate treatment will facilitate psychosocial adaptation of the patients and early recovery.

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