MORBIDITY AND MORTALITY IN CHILDREN IN RURAL COMMUNITY OF DISTRICT PESHAWAR

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ABSTRACT

Background: In Pakistan more than 20 million people are under five years age. The aim of this study was to determine the mortality rate, morbidity and its various causes in children of less than 5 years age in a rural community of District Peshawar.

Material & Methods: This descriptive study was conducted in the village Budhni of District Peshawar, from 1st January 2005 to 31st July 2006. Sampling technique was purposive. The data was analyzed in PMRC Research centre PGMI, Peshawar by using SPSS version 14. Descriptive statistics was given for qualitative variables and presented in the form of frequency and percentage.

Results: Two hundred & eighty-three children under 5 years age, presented to Budhni Health Centre during the study period. Male to female ratio was 1.9:1. Nine deaths occurred in children under 5 years during the study period. Most of the deaths 7(78%) were in the neonatal period. Among the diseases, acute respiratory infection was the leading disease comprising 27% of the total. Causes of death were neonatal jaundice (22%), diarrhea (11%), fits (11%), and unknown (45%).

Conclusion: Majority of deaths occurred in the neonatal period, which enhances the importance of antenatal care in the first month after birth. Infant/Child mortality in this region can be reduced by improvement in the health care system at peripheral level.

Key words: Mortality rate, Morbidity, Rural community, Peshawar.
MATERIAL AND METHODS

This descriptive study was conducted in a rural community, village Budhni of District Peshawar, from 1st January, 2005 to 31st July, 2006, to collect information on morbidity, mortality, and its causes in under 5 years children. Sampling technique was purposive.

All the information regarding type of disease, duration of illness, age, sex, births, and deaths of the children, were recorded by the staff of the Health Centre. Birth and death records of the village were also maintained in the heath centre. The causes of death in children were determined by verbal discussion with the parents /guardians (verbal autopsy) of the diseased children and hospital record. A male curaparamedic visited the residence of diseased children on the 4th day of death for this purpose.

The data was analyzed in Pakistan Medical Research Council, Postgraduate Medical Institute, Peshawar, by using SPSS version 14. Descriptive statistics was given for all qualitative variables and presented in the form of frequencies and percentages.

RESULTS

Two hundred & eighty-three children under five years age presented to PMRC Health Centre village Budhni during the study period; of which 185 (65%) were males and 98 (35%) females with a male to female ratio of 1.9:1.

Acute respiratory infection in 77 (27%) was the leading disease reported. Gastroenteritis was reported in 40 (14%), fever in 53 (19%), helminthes in 10 (4%), skin infections 32 (11%), eye infections 28 (10%), ear infections 9 (3%), and 34 (12%) were reported as unknown. (Table-1)

Table-2 depicts the age and sex distribution of the deaths in children. Nine deaths occurred of which 6 (66.7%) were male babies and 3 (33.3%) females. All the male babies died before completing their first year of life, while out of 3 female babies, 2 died before and one after 365 days of life.

Table-3 reveals the main causes of death, which include; neonatal jaundice in 2 (22%), fits in 1 (11%), cardiac congenital abnormality in 1 (11%) and undiagnosed in 5 (56%) cases.

<table>
<thead>
<tr>
<th>CAUSES / DISEASES</th>
<th>Male</th>
<th>Percent</th>
<th>Female</th>
<th>Percent</th>
<th>Total</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acute respiratory infection</td>
<td>56</td>
<td>73</td>
<td>21</td>
<td>27</td>
<td>77</td>
<td>27</td>
</tr>
<tr>
<td>Gastroenteritis</td>
<td>26</td>
<td>65</td>
<td>14</td>
<td>35</td>
<td>40</td>
<td>14</td>
</tr>
<tr>
<td>Fever</td>
<td>31</td>
<td>58</td>
<td>22</td>
<td>42</td>
<td>53</td>
<td>19</td>
</tr>
<tr>
<td>Helminthes</td>
<td>08</td>
<td>80</td>
<td>02</td>
<td>20</td>
<td>10</td>
<td>04</td>
</tr>
<tr>
<td>Skin infection</td>
<td>21</td>
<td>66</td>
<td>11</td>
<td>34</td>
<td>32</td>
<td>11</td>
</tr>
<tr>
<td>Eye infection</td>
<td>17</td>
<td>61</td>
<td>11</td>
<td>39</td>
<td>28</td>
<td>10</td>
</tr>
<tr>
<td>Ear infection</td>
<td>08</td>
<td>89</td>
<td>01</td>
<td>11</td>
<td>09</td>
<td>03</td>
</tr>
<tr>
<td>Unknown</td>
<td>18</td>
<td>53</td>
<td>16</td>
<td>47</td>
<td>34</td>
<td>12</td>
</tr>
<tr>
<td>Total</td>
<td>185</td>
<td>65</td>
<td>98</td>
<td>35</td>
<td>283</td>
<td>100</td>
</tr>
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</table>

<table>
<thead>
<tr>
<th>Age at Death(Days)</th>
<th>Number</th>
<th>Male</th>
<th>Percent</th>
<th>Female</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>0-7</td>
<td>3</td>
<td>2</td>
<td>67</td>
<td>1</td>
<td>33</td>
</tr>
<tr>
<td>8-30</td>
<td>4</td>
<td>3</td>
<td>75</td>
<td>1</td>
<td>25</td>
</tr>
<tr>
<td>31-365</td>
<td>1</td>
<td>1</td>
<td>100</td>
<td>–</td>
<td>–</td>
</tr>
<tr>
<td>&gt; 365</td>
<td>1</td>
<td>–</td>
<td>–</td>
<td>1</td>
<td>100</td>
</tr>
<tr>
<td>Total</td>
<td>9</td>
<td>6</td>
<td>67</td>
<td>3</td>
<td>33</td>
</tr>
</tbody>
</table>
DISCUSSION

Two hundred & eighty-three children under 5 years age visited Budhni Health Centre in the study period for treatment. Acute respiratory infection was the leading disease (27%). Pneumonia is one of leading cause of morbidity and mortality in children in developing countries. In Pakistan over 250,000 child deaths are annually contributed to Acute Respiratory Infection. Mortality is particularly high in rural areas where incidence of ARI is reported to be 30-35%. Pneumonia accounts for 28.5% of the deaths in children under 5 years of age. In our study, we found that ARI comprised 27% of the total illness, which agrees with those results. Pakistan has an IMR of 95/1000.

Respiratory symptoms are frequent among Pakistani children under 5 years of age. Cough and fever in the preceding 14 days affects over one in five children under age five. There is little variation between the sexes or residence of city and rural areas. Similarly, approximately 11-13% of children reported wheezing in the chest during the last 14 days.

ARI is the most common childhood illness throughout the world. It continue to be the major cause of death among children under five years of age in developing countries; in 1995 more than 3 million children died of pneumonia and a further 1.1 million from ARI, accompanied by other ailments. ARI/measles 640,000, ARI/pertussis 260,000, ARI/malaria 190,000 and ARI/HIV 20,000; with as many as eight episodes per child annually. ARI is also a leading cause of sickness and disabilities such as deafness.

Diarrheal diseases are an important cause of childhood mortality. Diarrhea is a frequent occurrence among children under 5 years of age in Pakistan. Every two weeks 20-30 percent of children have an episode of diarrhea. During the course of a year the average child may experience 5-12 episodes of diarrhea. Diarrhea is most frequent in the younger age group with little difference between the sexes or urban/ rural dwellers. In our study, Diarrheal diseases are 11%, which is 3rd leading cause of death.

Diarrheal diseases are associated with unsafe water and poor sanitation, coupled with poor food-handling practices. They are a graphic example of the synergy of poverty and lack of knowledge. Prevention and control, therefore, don’t solely rest with the health services but depend on education and economic development.

Worm infestation is one of the major causes of diarrhea in Pakistan. The most important way to control parasitic diseases among children include simple hygienic measures. The most common intestinal worms are roundworms, hookworms, and whip worms - each infects 170-400 million school-age children annually.

In our study the 2nd and 3rd common diseases are gastroenteritis (14%) and fevers (19%). Health policies are made when the researchers provide scientific data to health planners to reduce the morbidity and mortality. Mehnaz et al. in their community based study indicated that better selected community health workers trained for identifying cases of pneumonia provide better 1st line care and treatment. Initiation of breast-feeding practices, the use of pre-lacteal feeding practices, breast-feeding duration, firming, and selection of complements in the 1st year of life could better
prevent the acute respiratory infections in infants.\textsuperscript{13} The cross-sectional KAP study by Mehmood and Atif\textsuperscript{14} investigated that most mothers are aware of the need to increase dietary intake during pregnancy and lactation but financial constraints does not allow them to change their diets.

Although the infant mortality rate (IMR) of Pakistan is 95/1000, but in our study, the IMR is 25/1000, while child mortality rate is 28/1000 live births, this decrease in IMR & CMR is because of proper and better selected community and trained health workers for the early detection of disease and proper treatment. As 9 deaths occurred in children under 5 years ages during the study period, and majority of deaths were in the neonatal period (78%). This also enhances the importance of antenatal care and 1st few weeks after birth.

**CONCLUSION**

Majority of deaths occurred in the neonatal period, which enhances the importance of antenatal care in the first month after birth. Infant/Child mortality in this region can be reduced by improvement in the health care system at peripheral level.

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