FORGOTTEN KILLERS OF CHILDHOOD ILLNESSES: PREVALENCE AND PRACTICES

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ABSTRACT

Background: Diarrhea, pneumonia, and malaria account for 37% of under-five deaths worldwide, with only about one-third of children with these illnesses receiving appropriate treatment. Aims: to know about the prevalence, practices, health seeking behavior and knowledge about the forgotten killers among under five children in the Agra district. Study design: Community based cross sectional study utilizing rapid assessment procedures in Mohallas of Agra city and villages of Agra district. Material and methods: Semi structured and pre tested schedule was used to interview 3200 mothers/ guardians of 2953 under five children in 80 clusters of Agra district. Statistical analysis: Tests of significance like %ages, proportions and chi-square test were utilized. Results: The two weekly prevalence of diarrhea and ARI in under five children was found to be 11.9 % and 15.5 %. About diarrhea management, in the maximum cases (40%) there was no change in the amount of fluid given, while on demand fluid was offered to the 15.3 % children. Around 72 % have sought treatment for diarrhea and 66% for ARI. Nearly one-fourth did not know about signs and symptoms of pneumonia, ‘fast breathing’ was the most commonly known sign for ARI.

Key words: ARI, Diarrhoea, Prevalence, Practices

INTRODUCTION

Most low- and middle-income countries are making slow progress in addressing child mortality—too slow to achieve Millennium Development Goal 4 by 2015. Diarrhea, pneumonia, and malaria account for 37% of under-five deaths worldwide, with only about one-third of children with these illnesses receiving appropriate treatment.¹ They are also the leading causes of disability-adjusted life years across all age groups, contributes loss of 2 million young child each year ²,³ The SEARO-WHO carries 30% of the global burden, and these diseases affect mostly poor and marginalized groups. Simple, safe and inexpensive interventions with proven effectiveness are now available, but low coverage has resulted in poor control of this diseases.³ Incredibly, pneumonia- which kills more children under five than AIDS, malaria and measles combined- has received far less attention and funding than any of them, considered as forgotten killer causing pandemic.⁴

The present study was conducted to know about the prevalence, practices, health seeking behavior and knowledge about the forgotten killers among under five children in the Agra district.

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MATERIAL AND METHODS

Present study was conducted in Agra district of U.P. state, India. A cross sectional study, was done utilizing multi stage random stratified cluster-sampling and multi indicator rapid assessment technique for interviews. Study was conducted in 30 urban and 50 rural clusters of district, selected in two stages while in third stage 40 households were covered from four quadrants of the selected cluster. The non-responder, closed houses and persons who do not wish to respond were excluded from the study. The limitations realized during the rapid appraisal were lack of time and recall of the respondents.

A total of 2953 children and 3200 mothers/ guardians were interviewed for childhood illnesses and practices in the study. The information collected and data was entered in the MS Excel and analyzed with SPSS statistical software.

OBSERVATIONS

Out of 2953 children in this age group, 352 suffered from diarrhea and 458 suffered from ARI in the last two weeks from the day of survey. The two weekly prevalence of diarrhea and ARI in under five children was found to be 11.9 % and 15.5 %.

The prevalence of diarrhea in urban and rural areas was found to be 11.6% and 12% respectively with similar incidences in both the sexes. The prevalence of ARI in urban and rural areas was found to be 16.6 % and 13% respectively which was found to be higher in males (17.1%) of the district. It was inferred that the %age of children who had any illness (ARI and Diarrhea) in under five year age group was 27.4, which was found to be higher in rural (28.6%) compared to urban (24.7%) areas. These %ages were found to be higher among males (28.9%) compared to females (25.8%) in the district.

Diarrhoea Management Practices: Regarding the amount of fluids offered to children suffering from diarrhea, it was observed that in the maximum cases (40%) there was no change in the amount of fluid given as compared to routine intake. In the urban and rural areas, 17.6% and 9.2% children had been offered more fluids than before. Female children were found to be fed less in comparison to male children both in rural and urban areas. On demand fluid was offered to the 15.3 % children in the district with higher percentage in urban setting (21.6%) compare to rural (12.8%). This practice of as per demand fluid offering was more common with male children as 14.3 % in rural and 31.6 % in urban, and the corresponding figures in female children.
being 11.1 and 25.5% respectively. Regarding continuation of feeding during the diarrhoeal illness, it was observed that feeding was continued in 93.4% cases. The practice of giving same amount of food during the illness were found in 47.7% children while less amount of food was offered to near about 30% diarrhea cases. On demand feeding was practiced in 12.0% cases.

**Treatment Practices**: Out of 352 diarrhea cases, there were 253 children (71.9%) for whom treatment was sought from outside the home with no sex difference. Therefore out of the total surveyed children 11.9% had suffered from diarrhea while only 8.6% had sought treatment for it. In both the settings (urban and rural area), in about three-fourth cases, treatment was taken from outside home (76.4% urban and 70% rural) for diarrhea cases.

The children among who had ARI episodes during last two weeks only 66.4% had taken treatment from outside home. Rural mothers had sought treatment with a higher percentage (68.6%) as compared to urban mothers (59.6%). The most common source of seeking treatment both in the urban and rural areas was the private doctor with about equal percentages (55.1% in urban and 56.6% in rural) being 56.1% for the district. Services of government doctor were utilized for only 23.3% diarrhea cases in the district, this being higher in rural area (24%). However, treatment from chemist was taken only in 4.7% cases which practice was higher in urban area (8.9%). Treatment from health workers and other village level health functionaries were taken only in 15.8% cases.

It was observed that out of 253 children for whom the treatment was taken from outside home, only 155 (61.3%) were given oral rehydration salt packets (ORS). This percentage is being 71.8 in the urban areas and 56.6 in the rural area. Thus, out of the total 352 children who suffered from diarrhea, only 44% children received the ORS packets. The mothers who had given home remedies to their children were 375 (81.9%). This percentage was higher in children of mothers of urban area. The most common remedy utilized for ARI was Vicks massage in 65.1% children followed by tea and hot fomentation (61.9% and 42.1%) while ginger and more fluids were given to few children. The appropriate remedy utilized for ARI management was to give more fluids to children was used by only 26.5% mothers in urban areas and 13.7% mothers in rural areas. It was inferred that the average home remedy use was 2.08 being higher among rural children (2.09) compared to urban (2.04). This association is found to be statistically significant with P Value <0.001 and χ²=46.93 (df 4).

**Awareness regarding recognition of pneumonia and malnutrition**: The ability of the mothers of under-five children in recognizing pneumonia is very important in the management of ARI. For this, the knowledge of mothers or senior household members regarding signs and symptoms of pneumonia was enquired. A single response was recorded for each child. The awareness about “chest in-drawing” (7.3% and 9.3% respectively) and fever (14.8% and 11.6% respectively) as signs of pneumonia in rural and urban settings is found to be statistically significant (P<0.04 and P<0.02 respectively).

It was found that out of the total mothers or senior family members interviewed nearly one-fourth did not know about signs and symptoms of pneumonia with similar percentages in both urban and rural settings (26.0% and 25.5% respectively). Among the family members having awareness, ‘fast breathing’ was the most commonly known sign (42.2%) followed by fever, difficulty in speaking/eating, chest in-drawing and nasal blockage (13.9%, 8.7%, 7.9% and 1.6% respectively). For fast breathing as the sign of pneumonia, there were equal percentages in both the settings (42.2% in rural and 42 in urban).

All the above senior family members or mothers were interviewed regarding signs of recognizing malnutrition also and recorded as single response, all the responses for recognizing signs of malnutrition were found to be higher among urban respondents except underweight child compared to rural respondents. In rural settings maximum (31.7%) family members responded on underweight child as the sign of recognizing malnutrition while in urban area maximum (32.3%) supported the view of child looking weak.
DISCUSSION

The two weekly prevalence of diarrhea and ARI in under five children was found to be 11.9% and 15.5%. Panwar et al6 and NFHS-UP7 reported the two-week prevalence of diarrhea and ARI as 13.6 and 24.1% respectively, and as 8 and 7% respectively. Results should be compared after following various reasons like seasonal variation, socio-demographic profile age of mother at the birth of first child and distance from the district headquarter etc. Lower figure was reported from Southern Karnataka for diarrhea in 24 hours by Udaykiran et al8 as 6.8%. It is encouraging to find that the prevalence has declined by half over time (between NFHS-II and III)9 in the country from 19 to 9 for diarrhea and from 19 to 6 for ARI.

Table-1 : Community’s knowledge regarding recognizing the symptoms of pneumonia in children

<table>
<thead>
<tr>
<th>Symptoms of Pneumonia</th>
<th>Rural (n=2077)</th>
<th>Urban (n=876)</th>
<th>Combined (n=2953)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>No.</td>
<td>%</td>
<td>No.</td>
</tr>
<tr>
<td>Fast breathing</td>
<td>877</td>
<td>42.2</td>
<td>368</td>
</tr>
<tr>
<td>Difficulty in speaking/eating</td>
<td>178</td>
<td>8.6</td>
<td>80</td>
</tr>
<tr>
<td>Chest in-drawing</td>
<td>151</td>
<td>7.3</td>
<td>84</td>
</tr>
<tr>
<td>Fever</td>
<td>308</td>
<td>14.8</td>
<td>102</td>
</tr>
<tr>
<td>Nasal blockage</td>
<td>34</td>
<td>1.6</td>
<td>14</td>
</tr>
<tr>
<td>Do not know</td>
<td>529</td>
<td>25.5</td>
<td>228</td>
</tr>
</tbody>
</table>

MICS10 found that the two-week prevalence of any illnesses, which includes diarrhea, cough and fever, was 48.3 and for U.P. it was 54.4% while lower ages were found in present study. Better diarrhea management practices were reported by CES11, Panwar et al6 and MICS10, in which it was found to be 29.2, 23.7 and 16.0% children were offered ORT and increased fluids during diarrhea. Regarding continuation of feeding during the diarrheal illness, higher age was reported by Panwar et al6 (96.2%).
The most common source of seeking treatment for diarrhea both in the urban and rural areas was the private doctor with about equal %ages in urban and rural areas (55.1% and 56.6 %) being 56.1 % for the district. Similar findings were reported by NFHS\(^2\) as 61 and 62 % children reached up to the health facility for treatment of ARI and diarrhea respectively. Higher figures were reported by CES\(^1\) (72%). For treatment, 25.5 % children approached Govt health facility while 55.7 % had approached private health facility. Lower %ages reported by Taneja et al\(^1\) in a study from Delhi as 36.8% visited a private doctor and 7.2% visited a govt. health facility to seek treatment for the child. Dabral et al reported a higher ORS use rate of 66.9 % in under five children from Agra district while CES and NFHS II reported it to be quite low i.e.27 and 29 %. A total of 58.8 % respondents were able to recognize pneumonia, 15.5 % were having wrong knowledge, whereas 25.6 % did not comment. Nandan D. et al\(^3\) following multi indicator rapid assessment (MIRA) surveys in the districts of UP reported that the commonest symptom for which mothers sought treatment was fever i.e. 83.1, 91.6 and 91.8 % in Almorah, Etah and Mathura districts respectively. The home remedy use was found to be significant in rural areas probably because of faith in traditional medicine and accessibility to the healthcare services.

It is realized with the present study that the health workforce is doing hard work for achieving the customized targets, but as the awareness generation and providing health care at the door step requires political commitment, hierarchical support and community participation therefore these forgotten killers are still the main players in the cycle of child morbidity and malnutrition.

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