

# Awareness of Mothers Regarding Concept and Management of Diarrhea in Children of Taunsa Sharif, Pakistan

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## ABSTRACT

**Objective:** To assess the knowledge of mothers regarding diarrhea and the management practices of pediatric diarrhea.

**Study Design:** Descriptive /cross-sectional study

**Place and Duration of Study:** This study was conducted at Tehsil Headquarter Hospital Taunsa Sharif from June 2016 to September 2016.

**Materials and Methods:** A Performa comprising of questions was prepared aiming was to know the understanding of mothers regarding diarrhea. Presented a mother of a baby suffering from diarrhea had been instructed by the primary doctor to take the most appropriate answer. All mothers are willing to answer questions that were included in the study. The results were obtained using SPSS 23. Mean median, mode calculated and results presented by using tables and charts.

**Results:** Total 90 mothers were interviewed with boys 43 (48%) and girls were 47 (52%). The majority of mothers 60 (66.5%) were belong to low socioeconomic status. The median age was 1.5 years. Between the ages of 20-30, 67 (74%) mothers, 17 (19%) over 30 years, and only 6 (7%) mothers younger than 20 years. 68 (76%) mothers knew that how to make correct preparation of ORS, 14 (15%) was incorrect and 8 (9%) did not know how to prepare oral rehydration salts (ORS). 47 (52%) mother knew the wrong amount though 35 (39%) knew the right amount giving after each loose motion. Most of the mothers 40 (44%) were utilizing municipal water, 28 (31%) groundwater, 19 (21%) water filters and 3 (3.34%) mothers were buying it.

Although 40 (44%) of mothers thought that as the number of increased stool is diarrhea, only 14 (15%) of mothers thought diarrhea as stool with liquid concentration. However, 33 (37%) mothers thought these two features of stool as diarrhea and 4 (4.5%) mothers did not know about diarrhea. 26 (29%) of mothers considered dirty hands while, feeder 14 (15%) and 15 (16%) water thought as pathogenic factors, respectively. Mothers of 60 (66%) were educated and 31 (34%) were uneducated. 79 (87%) mothers were housewives and 12 (13%) were working women.

**Conclusion:** The mother's knowledge about diarrhea has increased in all its aspects. It is necessary to recognize the concept of quantitative signs of dehydration, oral rehydration salts given and to promote continued conventional feeding during illness.

**Key Words:** ORS; Diarrhea; Dehydration

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## INTRODUCTION

Diarrhea is one of the leading causes of child mortality under the age of five, responsible for death of 760,000 children per year in the world.<sup>1-4</sup> Especially in underdeveloped countries<sup>5</sup>.

Most children die because of severe water loss (dehydration) and fluid loss, which can be compensated by oral rehydration (ORS) in most cases.<sup>6-9</sup> Malnourished children have impaired immunity to life-threatening diarrhea, usually due to the high risk of bacterial infection, due to the large number of bacteria, through contaminated food, and the spread of parasite water from human to person.<sup>1</sup>

The Integrated Management of Childhood Illness (IMCI) guidelines advise the use of oral rehydration therapy (ORT), along with continued feeding, and zinc for appropriate management of diahorea.<sup>10</sup>

Most of the diarrhea episodes are cured at homes and mothers are the primary caregivers of children under the age of five.<sup>11</sup> WHO recommends that mothers and caregivers should be able to identify signs of dehydration, including excessive lethargy, poor skin tension and irritability, and baby without tears. One study showed that 73.1% of mothers identified only one

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of these signs.<sup>12</sup> Therefore, knowledge about this diarrhea mother is very important part. Awareness and perception of mothers regarding diarrhea and individual and family actions to prevent and / or control the disease, have vital importance of reducing diarrhea-related diseases and mortalities.<sup>13</sup>

Oral rehydration therapy (ORT) is simple, inexpensive and most effective in primary Interventional management of diarrhea. It can be easily initiated by the mother at home / caregiver as soon as possible in the onset of diarrhea.<sup>14</sup>

## MATERIALS AND METHODS

This was Cross-sectional descriptive study; location of this study was Tehsil Headquarter hospital Taunsa Sharif and was conducted from June 2016 to September 2016.

A Performa comprising of questions was prepared aiming was to know the understanding of mothers regarding diarrhea

Presented a mother of a baby suffering from diarrhea had been instructed by the primary doctor to take the most appropriate answer. All mothers are willing to answer questions that were included in the study. Mothers if they were reluctant to answer the questionnaire were skipped from study.

**Data Analysis:** The results were obtained using SPSS 23. Mean median, mode calculated and results presented by using tables and charts.

## RESULTS

Total 90 mothers were interviewed with boys 43 (48%) and girls were 47 (52%). The majority of mothers 60 (66.5%) were belong to low socioeconomic status. The median age was 1.5 years. Between the ages of 20-30, 67 (74%) mothers, 17 (19%) over 30 years and only 6 (7%) mothers younger than 20 years. 68 (76%) mothers knew that how to make correct preparation of ORS, 14 (15%) was incorrect and 8 (9%) did not know how to prepare oral rehydration salts (ORS). 47 (52%) mother knew the wrong amount though 35 (39%) knew the right amount giving after each loose motion. Most of the mothers 40 (44%) were utilizing municipal water, 28 (31%) groundwater, 19 (21%) water filters and 3 (3.34%) mothers were buying it.

Although 40 (44%) of mothers thought that as the number of increased stool is diarrhea, only 14 (15%) of mothers thought diarrhea as stool with liquid concentration. However, 33 (37%) mothers thought these two features of stool as diarrhea and 4 (4.5%) mothers did not know about diarrhea. 26 (29%) of mothers considered dirty hands while, feeder 14 (15%) and 15 (16%) water thought as pathogenic factors, respectively. Mothers of 60 (66%) were educated and 31 (34%) were uneducated. 79 (87%) mothers were housewives and 12 (13%) were working women.

The majority of mothers 82 (92%) were aware about one or more dehydration signs. Only a small number 6 (7%) of mothers did not have any knowledge of dehydration signs. Nearly half of the participating mothers 46(51%) want to stop routine diet during diarrhea. Most of the participating mothers 61(68%) were against to give medicine by themselves while 28(31%) favored self-medication.

## DISCUSSION

Acute watery diarrhea is a self-limiting disease and over 90% of cases can be successfully treated with oral rehydration therapy and continued feeding without using anti-diarrheal drugs.<sup>15</sup> Socio-demographic factors like education of the mothers, employments, and mother's age consociate with knowledge of the mothers around diarrhea and diarrhea care

Although mothers know that the level of diarrhea and the management at home, level of awareness, knowledge is often inadequate. This study shows that 92 (96.8%) of mothers believe that the number of stools is increased or stool with fluid congruent or both as diarrhea.

According to another study, 63.6, 64.3 and 75 mothers have a certain understanding of diarrhea and its management.<sup>16,18</sup> In recent years, many studies have demonstrated increased knowledge about oral rehydration.

In our study, 90.5% of mothers were having knowledge of oral rehydration,<sup>19</sup> whereas in other studies 95%<sup>20</sup> and 97.6% of mothers were having facts about oral rehydration salts and its usefulness is also in management due to dehydration of diarrhea.<sup>21</sup>

A similar study by Ahmed A et al, in Rawalpindi & Islamabad, 75% of mothers<sup>22</sup> and a study by Bhatia et al 86.7% of mothers claiming that they have knowledge about oral rehydration solution (ORS).<sup>23</sup> The percentage difference was influenced by maternal knowledge and practice regarding oral rehydration, which is expected to be influenced by the mass media and the time factor of health professionals.

For the preparation of ORS, in our study 73 (76.8%) of mothers correctly reviewed oral rehydration was also consistent with the preparation of study by Aiza M, et al, 228 (76%).

A study by Taha found that 64% of mothers and another study in Lahore, 69.3% of mothers do the correct preparation of ORS.<sup>24,25</sup> This percentage increase may be due to the control of diarrheal disease programs promoted by Pakistan government-supported activities.<sup>26</sup>

In the current study, 64 (67.4%) of mothers were in against to start medicine by themselves, in a study by Aiza M, et al<sup>19</sup> where only 21% of patients were against self-medication. Finding in our study 50.5% of mothers stopped regular feeding during diarrheal episodes. Findings in other study show that 96 cases (32%) of

cases stopped or reduce feeding.<sup>19</sup> In a study by Khan MA, et al, same diet as before diarrhea was given in 59.9% of cases and in 40.6% of cases either feeding was stopped or reduced in quantity.<sup>27</sup> while in other scrutiny 43.9% reduced or stopped usual food or mothers breastfeeding, 48.6% gave normal amounts of food or breastfeeding & only 7.5% increase in the amount of food or breast-feeding of children with diarrhea.<sup>28</sup>

Foods should never be limited during illness, and the preferred goal should be to maintain energy and higher levels of other nutrients in the intake. Community disease control give recommendation those children receiving semi-solid or solid foods, were continue their routine diet during diarrheal episodes.<sup>29</sup>

In this study 28.4% of mothers attributed dirty hands as major factor of diarrhea in other study FGD participators considered teething as the chief source of diarrhea.<sup>30</sup> In another study in rural communities in Kenya, 58.2% thought that contaminated water was the chief reason of diarrhoea.<sup>31</sup>

## CONCLUSION

The mother's knowledge about diarrhea has increased in all its aspects. It is necessary to recognize the concept of quantitative signs of dehydration, oral rehydration salts given and to promote continued conventional feeding during illness to handle this problem carrying high morbidity and mortality.

**Conflict of Interest:** The study has no conflict of interest to declare by any author.

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# Comparative Study of Bevacizumab and Triamcnenolone in Macular Edema Secondary to Branch Retinal Vein Occlusion

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## ABSTRACT

**Objective:** The present study was conducted to compare the magnitude of efficacy and safety of Intra-Vitreous Bevacizumab (IVB) and intra-vitreous Triamcnenolone (IVT) injection in Branch Retinal Vein Occlusion (BRVO).

**Study Design:** Comparative case series study

**Place and Duration of Study:** This study was conducted at the Department of Ophthalmology, El-Ibrahim Eye Hospital and Al-Tibri Medical College from January 2013 to March 2015.

**Materials and Methods:** A sample of 64 BRVO cases was selected by non-probability purposive sampling as per inclusion and exclusion criteria. The subjects were randomly grouped into; Group I. Bevacizumab (IVB) (n=32) and Group II. Triamcnenolone (IVT) (n=32). Baseline vision (BCVA) was noted using ETDRS acuity chart. Central macular thickness (CMT) was computed using optical coherence tomography (OCT). Informed written consent was taken. The data was analyzed on Statistix 8.1 using student t-test and Chi square test. P-value of  $\leq 0.05$  was taken significant.

**Results:** Mean  $\pm$  SD CMT in group I and II at baseline was  $365.71 \pm 119.7 \mu$  and  $363.91 \pm 153.9 \mu$  respectively ( $p=0.95$ ). Similarly, difference was not observed in BCVA for near between 2 groups at first and second visit (week 4) ( $p \geq 0.85$ ). At week 8 follow up, there was significant difference in the BCVA between groups (for distance  $p = 0.03$  and for near ( $p = 0.017$ ). At week 8, mean CMT was reduced in IVB group compared to IVT ( $p=0.045$ ). Mean  $\pm$  SD duration of BRVO was  $8.37 \pm 4.21$  and  $8.35 \pm 4.3$  months ( $p=0.09$ ) in IVB and IVT respectively. Subconjunctival hemorrhage, cataract and raised IOP were observed in IVT group.

**Conclusion:** Bevacizumab is more effective than triamcnenolone in improving vision and reducing macular edema secondary to Branch Retinal Vein Occlusion. Triamcnenolone showed more complications.

**Key Words:** Bevacizumab, Triamcnenolone, Macular edema

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## INTRODUCTION

Branch retinal vein occlusion (BRVO) occurs in one of the tributary of retinal vein. Its incidence in outpatient departments approximates to central retinal vein occlusion.<sup>1</sup> Branch retinal vein occlusion (BRVO) is a vision disabling clinical condition. Its incidence after 4<sup>th</sup> decade onwards is reported as 2.14/year/1000 population.<sup>2,3</sup> Previous studies have suggested BRVO predisposes to increased expression of a cytokine called vascular endothelium growth factor (VEGF). VEGF is involved in the pathogenesis of macular edema (ME).<sup>4</sup>

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Currently there is no effective and unanimously accepted treatment option for BRVO-related ME.<sup>2</sup> One modality of treatment used for ME includes photocoagulation but achieved limited results. Another available treatment option is the triamcnenolone which has shown variable success rates but at a cost of high complication rates.<sup>1,4</sup>

Currently, a newer drug modality is widely used called the Bevacizumab. Bevacizumab is a recombinant humanized monoclonal antibody which blocks angiogenesis by inhibiting all isoforms of VEGF. VEGF stimulates the angiogenesis in a variety of diseases, including the ME.<sup>5</sup> Bevacizumab inhibits and reduces not only the neovascularization but also macular edema.<sup>6</sup> Bevacizumab reduces macular edema and improves vision in BRVO related ME.<sup>7</sup> Triamcnenolone is also effective but has a lot of reported complications.<sup>8</sup>

Although previous studies had demonstrated the advantages and disadvantages of one treatment modality over other, however, the results are disputed and inconclusive.<sup>9,10</sup>