

Pattern of acute diarrhea and its management among children at DHQ Hospital, Attock city from July-August 2014.

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Abstract:

Introduction: Acute diarrhea is the 2nd most common cause of death among children under 5 years age countrywide. It is the passage of watery or loose stools 3 or more times in 24 hours and lasting less than 14 days.

Methodology: This Comparative study was carried out at DHQ Hospital Attock City from July-August 2014 by using a close ended questionnaire.

Results: From July 2014-August 2014, a total of 40 children having acute diarrhea were hospitalized in the DHQ Hospital Pediatric ward. There were more males n=24(60%) then females n=16 (40%) and the male to female ratio was 1.5: 1. 50% of the patients presented in 2nd half of 1st year. n=32 (80%) children presented with 4 days of illness. All patients had passed 8-10 stools per day. One had passed 15-20 stools per day. n=9 (22.5%) child pass small amount of blood/ mucous in stools. Exclusive breastfeeding was reported in n=8 (20%) of the patients. n=18 (45%) children did not show any signs of dehydration, n=15 (37.5%) showed some dehydration and n=7 (17.5%) showed severe dehydration. Symptoms associated with diarrhea were fever n=31 (77.5%), cough n=17 (17.5%), vomiting n=8 (20%), oral thrush n=1 (2.5%). Blood CP n=39 (97.5%), ESR, Stool Examination n=31 (77.5%), X-Ray Chest n=8 (20%) were the investigations done in children. ORS/OEM use rate was 40 (100%) while rate of antibiotic (ceftriaxone) was n=7 (17.5%), n=33 (82.5%) received Zinc Sulphate in syrup form, n=31 (77.5%) received Syrup Paracetamol.

Conclusion: Diarrhea is a common illness among children under 1-year age. Fever is the most common associated symptom with diarrhea. Parenteral diarrhea due to abdominal infections is also predominant condition.

Key Words: Diarrhea, Abdominal infections, Oral rehydration salt.

Introduction:

Acute Fever affects nearly 500 million children annually worldwide¹ and is the leading cause of death in children under 4 years old². In Pakistan, there are estimated 54 million episodes of diarrhea yearly, causing some 300,000 deaths of children below 5 years of age³. It is the passage of watery or loose stools 3 or more times in 24 hours and lasting less than 14 days. In infants and young children, acute watery diarrhea is most often due to rotavirus⁴. In older children, it is most often due to *E. coli* (ETEC)⁵. *Cryptosporidium* also appears to be an important cause among infants, even in the absence of HIV infection⁶. Many etiologic agents of acute watery diarrhea cause symptoms that are clinically indistinguishable. It is usually not necessary to identify a specific microbiologic diagnosis in order to provide supportive care, and antibiotics are not usually indicated. There are several arguments against the empirical use of antibiotics for acute infectious diarrhea. The most compelling of them is the fact that acute infectious diarrhea is typically a self-limiting disease, regardless of its etiology, with most cases resolving in less than three days⁷. Given the self-limiting nature of the disease, most patients with Acute diarrhea do not require laboratorial evaluation and can be safely managed as outpatients. Severely ill patients may need hospitalization and further investigation, including complete blood counts, serum electrolyte and stool culture. Rotavirus-associated diarrhea should always be excluded in such cases, given its propensity to cause severe and dehydrating pictures^{8,9}. The joint statement by WHO and UNICEF in 2004 recommended the use of low osmolarity oral rehydration solution (ORS) along with zinc for 14 days as an adjunct therapy

to decrease diarrheal deaths among the world's most vulnerable children^{10,11}. Low osmolarity ORS contains 75 mEq/L of sodium, 75 mmols/L of glucose and has an osmolarity of 245 mOsmols/L. New low osmolarity ORS is the single universal ORS solution for all types of diarrhea and for all ages. Zinc has been found to reduce the incidence, frequency, severity and persistence of diarrheal episodes in children older than six months¹².

Results:

From July 2014-August 2018, a total of 40 children were hospitalized in the DHQ Hospital Pediatric ward, which had diarrhea. There were more males n=24(60%) then females n=16 (40%) and the male to female ratio was 1.5: 1, n=20 (50%) of the patients presented in 2nd half of 1st year. n=32 (80%) children presented with 4 days of illness. All passed 8-10 stools per day. One patient had passed 15-20 stools per day. n=9 (22.5%) child passed small amount of blood/ mucous in stools. Exclusive breastfeeding was reported in n=8 (20%) of the patients. n=18 (45%) children did not show any signs of dehydration, n=15 (37.5%) showed some dehydration and n=7 (17.5%) showed severe dehydration. Symptoms associated with diarrhea were fever n=31 (77.5%), cough n=17 (17.5%), vomiting n=8 (20%), oral thrush n=1 (2.5%). Blood CP n=39 (97.5%), ESR, Stool Examination n=31 (77.5%), X-Ray Chest n=8 (20%) were the investigations done in children. ORS/OEM use rate was 40 (100%) while rate of antibiotic (ceftriaxone) was n=7 (17.5%), n=33 (82.5%) received Syp. Zinc Sulphate, n=31 (77.5%) received Syp Paracetamol.

Discussion:

Acute diarrhea is a global issue affecting mostly children under 5 years of age. This study was conducted in hospitalized children at DHQ Attock which showed the peak age between 2nd half of first year. In our study all passed 8-10 stools/day which is consistent with other studies. Levels of knowledge among mothers in areas of fundamental importance for diarrheal disease prevention, such as importance of exclusive breastfeeding and proper disposal of feces, were strikingly low. Exclusive breastfeeding was found to be only 20%, however, exclusive breastfeeding is known to provide significant protection against diarrheal diseases and related mortality.^(13,14) The PDHS national survey reported exclusive breastfeeding rates in Pakistan for children less than 6 months of age to be only 37%¹⁵ that slightly matches with our result. Systemic infections associated with diarrhea include influenza, measles, dengue fever, human immunodeficiency virus infection, and malaria. Serious bacterial infections associated with diarrhea include pneumonia, urinary tract infection, meningitis, and sepsis. These concomitant illnesses are major causes of mortality among children brought to medical attention for Acute Fever^{16,18}. In our study fever and cough were the most common symptom associated with diarrhea, children were evaluated for systemic infections with the help of laboratory evaluations. The prescription of ORS for the management of Acute Fever has increased in developing countries but the use of drugs still remains high. In this study, physicians prescribed ORS along with drugs. This practice is further reinforced by their belief that the majority of mothers cannot be satisfied with ORS alone. Perception of children preference had no effect on reported use of ORS. This suggests that education of mothers about the value of ORS alone for Acute Fever can influence physicians' practice.

WHO recommendations to prevent diarrhea include:

- Exclusive breastfeeding until age six months, and continued breastfeeding with complementary foods until two years of age. Complementary feeding may be considered in younger infants if growth is inadequate.
- The consumption of safe food and water. If available, water brought to a rolling boil for at least five minutes is optimal for preparing food and drinks for young children.
- Handwashing after defecating, disposing of a child's stool, and before preparing meals.
- The use of latrines; these should be located more than 10 meters and downhill from drinking water sources.

Conclusion:

Diarrhea is a common illness among children under 1-year age. Fever is the most common associated symptom with diarrhea. Parenteral diarrhea due to respiratory infections is also predominant condition.

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