AFGHAN MEDICAL JOURNAL

KABUL UNIVERISITY OF MEDICAL SCIENCES ABU ALI IBN SINA

Vol 1, Issue 1 | Mar 2024 AMJ e-ISSN: 3007-0805

Prevalence of Diarrhea Types among Children Admitted in the Pediatric Department Of Maiwand Teaching Hospital in Kabul City during One Year

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Abstract

Introduction: Diarrhea is a clinical condition which is defined as when a child has three or more loose defecation in one day. Acute diarrhea has rapid onset and lasts for less than two weeks, persistent diarrhea lasts for longer than two weeks and frequently has infectious causes, and chronic diarrhea lasts for longer but particularly does not have infectious causes.

Objective: To study the prevalence of diarrhea types among pediatric population admitted to Maiwand Teaching Hospital's (MTH) pediatric department over the course of a year.

Method: This is a cross sectional study which includes 4125 patients who had been hospitalized during one year (March 2021-March 2022) in MTH, the sampling method was Census and the patients who suffer from severe acute malnutrition (SAM) or not has been considered

Results: This cross sectional study has been done on 4125 child who had been hospitalized in pediatric department of Maiwand Teaching Hospital during one year and the prevalence of diarrhea according to age, gender and its types among patients who has been suffering from (SAM) or has not been suffering from (SAM) is considered and at result it has been found that the prevalence of diarrhea among all hospitalized children is 25.89 percent. Among those who have not been suffering from (SAM) the prevalence of diarrhea was 21.77% whereas among those who have been suffering from SAM the prevalence of diarrhea was 35.75%. In this research it has been found that the prevalence of diarrhea is more in boys than in girls (59.92%). According to age the prevalence of diarrhea was much more at the age of 2months-3years (53.26%). The prevalence of acute diarrhea was 85.95% and was the most common type of diarrhea found in this research.

Conclusion: Acute diarrhea is still a great problem in developing countries among pediatrics population and the prevalence of it relates directly to the nutritional status of the child.

Keywords: Acute diarrhea, Age, Chronic diarrhea, Diarrhea, Dysentery, Severe acute malnutrition, Sex

Introduction

Frequent loose or watery bowel motions that differ from a child's typical pattern are referred to as diarrhea. Anorexia, vomiting, rapid weight loss, stomach pain, fever, or blood passing may occur together with diarrhea. Dehydration is likely if diarrhea is severe or persists for a long time. Chronic diarrhea frequently leads to weight loss or an inability to gain weight, even in the absence of dehydration (UNICEF, 2016)

As of 15 March 2023, the highest number of suspected AWD/cholera cases in the EMRO region were reported from Pakistan (335 105, CFR 0.01%),* followed by Afghanistan (268 072, CFR 0.04%), Syria (100 598, CFR 0.12%), Yemen (22 902, CFR 0.10%), Somalia (19 667, CFR 0.49%), Iraq (11 097, CFR 0.23%), Lebanon (7085, CFR 0.36%), and Islamic Republic of Iran (360, CFR 1.67%). In children, diarrhea is a highly prevalent problem, and worldwide, diarrhea and dehydration result in 1.5 to 2.5 million fatalities per year. It represents 9% of hospitalizations for children under the age of five in the US. (UNICEF, 2019).

Diarrhea is a significant public health issue in developing nations. Diarrhea causes 525,000 under-5-year-old deaths annually, or about 2195 a day. This is the second largest cause of mortality for children under the age of five and accounts for 8% of all fatalities. Worldwide, children under 5 years old experienced 1.7 billion episodes of diarrhea each year. South Asia and sub-Saharan Africa saw the most of illness and mortality, with 88% of cases being attributed to contaminated water, poor sanitation, and inadequate hygiene. Despite a 60% reduction in global diarrhea-related fatalities among children under 5 between 2000 and 2017 (WHO, 2017).

According on when it starts and how long it lasts, diarrhea is categorized as acute (less than seven days), prolonged (7–14 days), persistent, or chronic (14 days or longer). Although they are sometimes confused, "chronic" diarrhea typically refers to structural and/or inflammatory bowel diseases that frequently last longer than 4 weeks, whereas "persistent" emphasizes the existence of an acute-onset diarrheal episode beyond 2 weeks and is thought to have an infectious cause. The etiology of chronic diarrhea in children varies depending on the child's age, immunological condition, socioeconomic situation, and clinical environment. Chronic diarrhea is classified as fatty or malabsorption, inflammatory or most commonly watery. Chronic bloody diarrhea may be due to inflammatory bowel disease (IBD), which is ulcerative colitis or Crohn's disease. Other less common causes include ischemia of the gut, infections, radiation therapy and colon cancer or polyps. Infections leading to chronic diarrhea are uncommon, with the exception of parasites. Globally, enteric infections are the most common cause of chronic diarrhea, and persistent symptoms may result from subsequent infections with the same or different microorganisms. Inflammatory bowel illnesses, functional intestinal abnormalities, and nutritional malabsorption are among additional causes of chronic diarrhea (Shine, Muhamud, & Adanew, 2018).

Diarrhea in under- five has been a second great cause of mortality and morbidity in all over the world. According to a report of World Health Organization (WHO) annually 1.5 million of children die because of diarrhea and approximately half of them would happen in Africa or other developing countries. The children who have lower age are more prone to acute diarrhea and basically they are less than two years of age, but in recent years the number of deaths from acute diarrhea is

lesser around the world. In African countries the prevalence of diarrhea seven fold more than European countries (Kasye , Garoma , & Kassa, 2018). The prevalence of diarrhea differs from one geographical area to another, for instance in Iraq 17.7 -46.1% in Cameron 23,8%, in Tanzania 32.7%, in Rovenda 26.7% and in Ethiopia 8.5 to 54% (Tambe , Nzefa, & Nicoline, 2015).

The cause of chronic diarrhea is multifactorial and may be due to recognized bacteria such E. coli, Shigella, or campylobacter causing damage to the mucous membrane of the small intestine. According to recent studies, 23% of children with shigellosis go on to have persistent cases (Gedamu, Kumie, & Haftu, 2017)

It is uncertain how common chronic infectious diarrhea is in children, and prevalence varies greatly by location and clinical environment. 12–35% of children with severe diarrhea in low-income countries experience a protracted course, and 5-7% of cases linger longer than 14 days. In the US, 8% of kids who seek ambulatory care for loose/watery stools meet the criteria for chronic infectious diarrhea, with a yearly incidence of 1 in 5 kids. However, 1 in 10 children who were referred to a pediatric gastroenterology center in Europe for chronic diarrhea showed signs of an infectious cause, even though conventional microbiologic tests may not have been sensitive enough to find viral infections in this study. Immune compromised children living in high-risk environments have different etiologic range, clinical characteristics, and consequences of chronic infectious diarrhea than do otherwise healthy children (Lo Vecchio,, Conell, & Guarino, 2021).

Exclusive breastfeeding, educational level of the parents, monthly income of the family, sources of the drinking water, hand sanitation of the caregiver of a child, water source tanks are factors that relate directly to the incidence and death because of diarrhea in under five children (Basil JY, 2017).

Diarrhea is the second significant cause of death in under-five children around the world and kills approximately 2.5 million of children annually, 60 to 70 percent of them are under five. A cross sectional research by Adugna Fenta in 2020 in Ethiopia on 717 under five children had shown that the prevalence of acute diarrhea was 14.5%. 55.8% of them were boys and 44.2% of them were girls. 11.6% of them were under six months, 48.3% of them were seven months and 40.2% of them were more than 25 months of age (Fenta, Alemu, & Angaw, 2020)

In a research by community based descriptive cross sectional study by Aun Muhammad et al in 2022 on 104 patients the prevalence of diarrhea in 3 months was 90%. In this study 94 patients for 3 months at least have had one episode of acute diarrhea and breastfeeding was discontinued in 44% of them during the period suffering from diarrhea (Muhammad, et al., 2022).

The surveillance system in Afghanistan has recorded a total of 4915 instances of acute watery diarrhea between 12 September and 31 December 2021. Of these 4625 cases (94.1%) are from Kabul province (including Kabul city and Sarobi district), 231 cases (4.7%) from Kandahar, 24 cases (0.5%) from Zabul, and 35 cases (0.7%) are reported from Laghman province. 50.2% of the total recorded cases include male, while 49.8% involve female gender. Between the ages of 15 and 29 account for 31% of instances, while children under the age of 5 make up 17.3% of cases (Yachha , Misra, Malik, Nagi , & Mehta, 2011).

Behera & Mishra reports that there were 632,344 fatalities overall in 2019 and the mortality rate was 45 per 100,000 people. In 2019, there were 55,309 children under the age of 5, with a mortality rate of 47 per 100,000 people. Additionally, this report details gender-based variations in diarrhea-related morbidity and fatalities in India in 2019. According to statistics, there are 32, 31 deaths for men and 59, 31 for women across all age categories. Due to the cause of diarrhea, child mortality is more likely, and the gender difference between a male and female kid is evident (Behera & Mishra, 2022).

However, there is little information available about diarrheal disease in Kabul City hospitals especially in under-five population. The purpose of this study was to determine the prevalence of diarrheal illness and in children under the age of five in recent year in a hospital setting of Kabul city of Afghanistan. The results will help children under the age of five live better lives. Additionally, the data can be used to create efficient educational initiatives that will enhance children's overall health. Similar to that, the information on acceptable services that will be provided by this study will help policymakers and program designers.

Objectives

To find the prevalence of diarrhea according to age, sex and its types between the children who were suffering from SAM and who were not suffering from SAM in inpatient setting of pediatric department of Maiwand Teaching Hospital during one year.

Method

This is a hospital based descriptive cross sectional study which has been done in pediatric department of Maiwand Teaching Hospital on 4125 patients who were hospitalized during the year 2021. The method of sampling was Census and all the patients who have been suffering from diarrhea and were hospitalized in pediatric department were selected. The patients who were not accepted to be hospitalized by their parents or before being hospitalized lost their lives had been excluded. The data collected have been analyzed by SPSS v.20.

Maiwand Teaching Hospital is a tertiary hospital located at the center of Kabul city of Afghanistan as a university hospital that provides health services as well as training of young medical doctors and medical students who study in Kabul University of Medical Sciences which is a governmental university of Afghanistan. This university has a pediatric department which provides health services in Maiwand Teaching Hospital. The department has (100) beds for pediatric patients.

Results

This study was conducted in 2021 (March 2021 –March 2022) with the participation of 4125 patients who referred to be admitted in pediatric department, and the prevalence of diarrhea has been studied.

Table 1. The prevalence of diarrhea according to the total number of patients admitted to the hospital.

The Admitted Patients	Percentage	Number

With diarrheal disease	25.89	1068
Without diarrheal disease	74.11	3057
Total	100	4125

In the above table, it can be seen that one fourth of the patients admitted suffered from diarrheal diseases.

Table 2. The prevalence of diarrhea among patients with or without severe acute malnutrition (SAM)

The admitted patients who were not suffering SAM

Prevalence	**Percentage**	**Numbers**
Other disease	21.77	811
Diarrheal diseases	78.22	2914
Total	100	3725

The admitted patients who were suffering SAM

Prevalence	**Percentage**	**Numbers**
Other disease	64.25	257
Diarrheal diseases	35.75	143
Total	100	400

In the above table, it can be seen that the prevalence of diarrhea among patients who were suffering SAM is more than who were not.

Table 3. Prevalence of diarrhea in terms of gender in all children under study

Not Suffering SAM

Gender	**Other Diseases**		**Diarrheal Disease**		**Total**	
	Percentage	**Numbers**	**Percentage**	**Numbers**	**Percentage**	**Numbers**
Boys	42.64	1600	14.55	546	57.19	2146
Girls	31.98	1200	10.10	379	42.08	1579
Total	74.62	2800	24.65	925	100	3725

Suffering SAM

	Other Diseases		**Diarrheal Diseases**		**Total**	
Gender	**Percentage**	**Numbers**	**Percentage**	**Numbers**	**Percentage**	**Numbers**
Boys	38.5	154	22.25	89	60.75	243
Girls	25.75	103	13.5	54	39.25	157
Total	64.25	257	35.75	143	100	400

In the above table, it can be seen that the prevalence of diarrhea in girls is less than boys.

Table 4. Distribution of diarrhea in terms of age in all children under study.

	Other Diseases	**Diarrheal Diseases**	**Total**

Age	Percentage	Number	Percentage	Number	Percentage	Number
Less Than 2mo	10.95	452	3.39	140	14.35	581
2mo-3yr	40.12	1655	13.13	542	53.26	2197
3-5yr	8.96	370	3.53	146	12.50	474
More Than 5yr	14.06	580	5.81	240	19.87	772
Total	74.08	3057	25.86	1068	100	4125

In the above table, it can be seen that the highest prevalence of diarrhea in the research is more in the age of two months to three years.

Table 5. Prevalence of diarrhea according to its type

Type	Percentage	Number
Acute	85.95	3202
Persistent	8	298
Dysentery	4	149
Chronic	2.01	75
Total	100	3725

In this table, it can be seen that the highest prevalence of diarrhea in the study was acute diarrhea.

Discussion

This descriptive cross sectional study which has been done in one year on 4125 patients who has been hospitalized in pediatric department of Maiwand Teaching Hospital from (March 2021-March 2022)

In this research it has been found that the prevalence of diarrhea was 25.89%. In a research which has been done by Ali Asghar Kolahi in Iran in 2008 on 2095 patients reported that the prevalence of diarrhea was 10.3% (Kolahi, Nabavi, & Sohrabi, 2008). In another research by Aun Muhammad et al in 2022 on 104 patients during 3 months it has been found that the prevalence of diarrhea was 90%. In this research 94 patients had at least one episode of diarrhea during 3 months (Muhammad, et al., 2022). In another cross sectional research by Adugna Fenta in Ethiopia in 2020 on 717 children under five showed that the prevalence of diarrhea was 14.5% (Fenta, Alemu, & Angaw, 2020). Overall the prevalence of diarrhea differs from one geographical area to another for example in Iraq it is 17.7 to 46.1%, in Cameron it is 23.8%, in Tanzania its 32.7%, in Rovenda its 26.7% and in Ethiopia 8.5-54% (Tambe , Nzefa, & Nicoline, 2015).

In this research it has been found that the prevalence of diarrhea who were not suffering from SAM 21.77% but it is 35.75% among the patients who have been suffering from SAM. This result shows that the prevalence of diarrhea is very high in children who are not well nourished. Results of research by Getu Debalkie Demissie in 2021 in Africa showed that the prevalence of diarrhea is 15.3% in children under-five directly related with age of mother, economic index, mother education, mother occupation, and age of the child, duration of breastfeeding and water sources. Another research in Bangladesh also reported that SAM and diarrhea have close relation and directly correlates with mortality rate. It is also known that the prevalence of diarrhea among SAM patients is because of immune insufficiency and disorders of absorption (Mondal, 2009). It has been demonstrated that there is a marked negative relationship between diarrhea and physical growth and development of a child. (Basil JY, 2017) Diarrhea-related sickness results in a 20–40 gram weight loss each day. More significant, chronic diarrhea is linked to poor nutrition. Children that are malnourished frequently have no "catch-up growth." The duration of diarrhea is strongly predicted by malnutrition, especially wasting, and a prolonged illness may exacerbate nutritional failing and hence raise the chance of death. (Gedamu, Kumie, & Haftu, 2017)

Some of the known mechanisms that have an effect on nutrition during an episode of diarrhea include poor appetite, vomiting, deliberate food withholding leading to poor intake, malabsorption of macro and micronutrients, hastening of intestinal transit time, disturbance of metabolic and endocrine functions, and direct loss of protein and other nutrients in gastrointestinal tract. Furthermore diarrhoea of infectious origin causes cytokine induced malnutrition which results from the actions of proinflammatory cytokines like tumour necrosis factor and interleukin 1, 6 and 8. (Kasye , Garoma , & Kassa, 2018)

Existing malnutrition is linked to slower epithelial cell turnover, which can extend an episode of infectious diarrhea both on its own and by encouraging tissue penetration by more enteropathogens. Malnutrition may also affect the protective host factors, favoring the pathogenic microorganisms' ability to colonize the intestines. (Bandsma, 2019)

Kwashiorkar may cause mucosal damage ranging from mild to severe alterations to flat lesions identical to those of celiac disease. The relationship between diarrhea and malnutrition is a perilous web that can be untangled by promoting exclusive breastfeeding, hygienic weaning techniques, clean drinking water and hand washing, improved nutrition, the measles vaccine, and other immunizations against enteropathogens that are soon to be available; and standard case management with a focus on nutritional support and rehabilitation. (DuPont, 2016)

As it has been noted, diarrhea is more common to SAM patients and can even cause severe acute malnutrition because malnutrition causes immune deficiency and the child's resistance is reduced to the diseases, malabsorption occurs and finally diarrhea is caused. On the other hand, changes of cylindrical epithelium to

cone epithelium in in small intestines in severe malnutrition patients also pave the way for reducing the absorption level and cause diarrhea to them.

In this research the prevalence of diarrhea has been studied according to the gender and it has been found that the prevalence of diarrhea among boys is 57.19%. The prevalence of diarrhea among patients who have been suffering from SAM is also higher in boys, it is 60.75%. In a research by Kermani in Iran in 2008 on 424 patients the ratio of persistent diarrhea in boys and girls was 1.1 but in acute diarrhea this ratio is 1.4 (Kermani, Jafari, Mojarad, Hoseinkhan, & Zali, 2010). In another research by Ali Asghar Kolahi on 2095 child it has been found that the prevalence of diarrhea is 10.3%, 50.7% of them were boys, 49.3% of them were girls (Kolahi, Nabavi, & Sohrabi, 2008). Research by Fenta in 2020 in Ethiopia on 717 children under five shows that the acute diarrhea was 14.5% and 55.8% of them were boys and 44.2% of them were girls (Fenta, Alemu, & Angaw, 2020). In this case our research has a minor difference with the above international research because the cultural specification of every community is quite different. In our community the parents have a good attention to their kids who are boys, if they have a minor illness they would be brought immediately to the hospital and they hospitalize them with no resistance. So the number of boys who has been hospitalized is more than girls. On the other hand the parents take their sons out of home when they are going out and feed them out of home more than girls, so the boys can face with the infections more than the girls.

In this research it has been found that most of the children who had been suffering from diarrhea were at the age of 2months to 3 years that is 53.26%, in fact we studied the prevalence of diarrhea in four age categories: less than 2months, 2 months to 3 years, 3years to 5 years and more than 5 years. In a research by Ali Asghar Kolahi in 2008 on 2095 patients it has been shown that the prevalence of diarrhea in children less than 6 months 7.5%, between the ages of 6-12months was 15.2%, at the age of 13-24 months 20.7%, at the age of 25-36months 18.9%, at the age of 37-48 months 20.7% and at the age 49-60 months 24.5% (Kolahi, Nabavi, & Sohrabi, 2008). In a research by Fenta by in 2020 in Ethiopia on 717 children under five it has been shown that 11.6% of them were less than 6 months, 48.3% of them were 7-24months and 40.3% of them were more than 25months (Fenta, Alemu, & Angaw, 2020). As it is known that the prevalence of diarrhea is more common at the age of 6 months to 3 years because at this period of age the child starts teetering and brings everything to their mouth when available this predispose infection to the gastrointestinal system. On the other hand children at this period of age have no experience of food materials other than the nonfood materials, so they try to taste many things. The immunity of children at this age is not still well developed, so the prevalence of diarrhea can be more than the other ages.

This study indicates that acute diarrhea is the most frequent type of diarrhea seen in the hospital (85.95%), and persistent diarrhea is the second most common type of diarrhea. This finding indicates that most varieties of diarrhea are likely infectious, as opposed to other types. In a community based descriptive cross sectional study by Muhammad et al in 2022 on 104 patients the prevalence of diarrhea in 3 months was 90%. In this study 94 patients for 3 months at least have had one episode of acute diarrhea. In this study it has been cleared that the prevalence of persistent diarrhea was the second cause that children have to be hospitalize because of diarrheal illness (8%). (Muhammad, et al., 2022) According to DuPont HL, the majority of the information on persistent diarrhea comes from studies of locals, expatriates, and visitors to underdeveloped nations where follow-up investigations have been carried out. About 3% of visitors to impoverished nations get persistent diarrhea (DuPont, 2016).

It was discovered that the incidence of persistent diarrhea was 6.3 per 100 child, among children aged 0-71 months and was highest (31 per 100 child-years) among those aged 0-11 months in rural northern India. This cohort of 963 children aged 0-71 months was observed prospectively for 12 months through weekly household visits. There were no significant sex-related differences in the incidence of the disease, and the overall seasonal distribution of acute and persistent diarrhea was similar. Persistent diarrhea was an important problem among children during the first 2 years of life (Bhan, et al., 1989).

Over the past few decades, persistent diarrhea may have been less common. The connection between particular bacterial, viral, and parasite illnesses and recurrent diarrhea is still up for debate. Persistent diarrhea is linked to immune system weakness notably that brought on by HIV infection, and malnutrition. Management includes fluid resuscitation and improving nutritional status. There is a lack of evidence on the use of antibiotic therapy for persistent diarrhea. There is increasing interest in nutrient-based interventions, including pre- and/or probiotics that can modify the microbiome and thereby potentially prevent or improve the outcome of persistent diarrhea in children. (Bandsma, 2019)

Therefore, we may conclude that the prevalence of persistent diarrhea in our study is comparable to that in other studies, although persistent diarrhea is more closely associated with the child's nutritional status and the cause.

In this study, it was discovered that 4% of children in inpatient settings had dysentery.

In a study conducted by FERDOUS discovered the typical etiological agents and distinctive clinical characteristics of dysentery cases in children under the age of five and contrasted them with non-dysentery diarrhea cases from the same group. 682 (29%) of the 2324 under-five-year-old patients treated at Kumudini Hospital between January 2010 and December 2011 had dysentery. This study demonstrates the necessity of effective public health measures to lessen the prevalence of dysentery in Bangladesh (FERDOUS, et al., 2014).

A prospective study on 60 children suffering from clinical dysentery over a 16-month period by Finkelstein in Israel revealed that clinical dysentery accounted for 1.7% of all pediatric hospitalizations during this period. In this study children with positive and negative stool cultures did not significantly differ in their clinical traits or laboratory test results. 40% of the children hospitalized for clinical dysentery were eligible for antibiotic treatment. In Israel, children who are hospitalized for clinical dysentery receive early empiric antibiotic treatment as the risk of severe bacterial infections in stool could not be discriminated in patients with clinical dysentery by clinical or laboratory markers (Finkelstein, et al., 2002).

In another study in Iran by Khoubfekr in 2022, it is found that the highest prevalence was observed in counties (i.e., Sarbisheh, Zirkooh, Darmiyan, and Nehbandan) sharing border with Afghanistan. The highest prevalence of the disease was reported in men (n=639, 54.1%) and villagers (n=702, 59.4%). As

well, the age group under 6 years old had the highest frequency of the affected cases (n=110, 30.6%). Shigella and E. coli were the most frequently reported causes of dysentery (48.2% and 30.9%, respectively) (Khoubfekr, et al., 2022).

Overall, the results of this study about dysentery are different from those of the other studies mentioned above, and the reason may be assumed to be that the prevalence of it is related to the custom of every different nation, in some places where hygiene is good, the prevalence is less common but increases in places where the hygiene is not satisfactory, and the prevalence gets higher. And as this study has been conducted in hospital base in inpatient setting only severe cases had been hospitalized others are treated as outpatients so the number of the cases may be higher in the community.

In this research it was determined, that only 2.01% of the diarrheal cases hospitalized, suffered chronic diarrhea. It is uncertain how common chronic infectious diarrhea is in children, and prevalence varies greatly by location and clinical environment. 12–35% of children with severe diarrhea in low-income countries experience a protracted course, and 5-7% of cases linger longer than 14 days. In the US, 8% of kids who seek ambulatory care for loose/watery stools meet the criteria for chronic infectious diarrhea, with a yearly incidence of 1 in 5 kids. On the other hand, 1 of 10 children referring to pediatric gastroenterology center for chronic diarrhea in Europe, demonstrated an infectious origin, although routine microbiologic investigations may have lacked sensitivity to detect viral infections in this population (Guarino , Lo Vecchio, & Berni, 2012).

The true incidence of chronic diarrhea in India is not known. There are many causes for chronic diarrhea and with better facilities these are being increasingly diagnosed in India. In a study on 137 children with chronic diarrhea, celiac disease was documented in 26%, parasitic infections in 9% and tuberculosis in 5% of children. (Lo Vecchio,, Conell, & Guarino, 2021) In a study by Abdulridha, conducted in 2020, to evaluate and determine the appearance of diarrheal diseases among hospitalized children. Among the 1521 children who were screened, 616 patients (or 40.5%) of the hospitalized children under the age of five who had diarrheal disorders included (332 male patients, or 53.9% of the total), and (284) female patients, or 46.1%. The majority of cases 78.4% were acute diarrhea and chronic cases (21.6%) representing the remainder. (Basil JY, 2017)

the prevalence of chronic diarrhea in this study had been lower than the other studies and we can infer that the cause could be lack of diagnostic measures available in the country, low economy of the families to do diagnostic examinations and limitations of lab tests available in governmental hospitals where free services obtainable.

Conclusion

Diarrhea is still a significant problem among children under five years of age and can be a major cause of being hospitalized in our country. The prevalence of acute diarrhea is more common in children and relates directly to the nutritional status of the child.

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