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Prevalence of gastroenteritis among children admitted to Bint-Alhuda Maternity and Children Teaching Hospital (MCTH) , Thi-Qar in 2021

A graduation thesis
submitted to the Board of the College of medicine, University of thi-Qar, in
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بِسْمِ اللَّهِ الرَّحْمَنِ الرَّحِيمِ
يَرْفَعِ اللَّهُ الَّذِينَ آمَنُوا مِنْكُمْ
وَالَّذِينَ أُوتُوا الْعِلْمَ دَرَجَاتٍ
وَاللَّهُ بِمَا تَعْمَلُونَ خَبِيرٌ
صدق الله العلي العظيم

سورة المجادلة الآية (11)

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Summary

A clinical prospective study conducted on 155 child with gastroenteritis ,admitted to Bint All_huda maternity and children teaching hospital (MCTH) during period July 2021 to January 2022..

Aim of the study in to shed same light on the clinical and epidemiology aspect of gastroenteritis a mong children in MCTH_THi_qar..

The study show male predominance than female with percentage (63)% (37)% respectively.

The majority of causes gastroenteritis was in the age group below 1year (78.7%) . Main clinical presentation were diarrhoea (92.2%) %,vomiting (65.8 %) , %fever (78.7%). The study showed the productive effect of breast feeding against gastroenteritis where the lowest percentage of infection was(8.38 %)No mortality rate reported during the study period. Concerning the causative agent of diarrheaThe parasitic infection was common one 94 (60.6%) *E.histolytica*, 66 (39.4%) unknown.

Key word :Gastroenteritis,MCTH THi_qar



Epidemiology of gastroenteritis:

GE is a common clinical problem in children. It's the leading cause of illness and deaths among children in developing countries .

Diarrhea in children accounts for 5,000,000 deaths per year in the developing world.(18% of childhood deaths),main cause of death from diarrhea is dehydration.

The world Health Organization (WHO) suspects that there are > 700 million episodes of diarrhea annually in children < 5 years of age in developing countries.

The incidence of diarrhea 3.2 episodes per child / year , Each year more than 300 U.S. children die from this illness , In U.S.alone GE accounts for approximately 10 % of hospitalization in children less than 5 years of age.

Acute gastroenteritis is a major health problem in Iraq and responsible for 14% of deaths under 5 years due to dehydration .

Definition of diarrhea:

- Excessive loss of fluid and electrolytes in the stool .
- Increased total daily stool output > 10 gm stool /kg /day .

- Passage of one or more loose, watery, diarrheal stool per day (NB: diarrheal stool is any stool that take the shape of container.)
- Is state of water and electrolytes malabsorption leading to accelerated excretion of intestinal contents .
- Excessive daily stool volume(> 10 ml stool/kg) body weight

Pathophysiology of diarrhea:

During ordinary physiological function, small intestine and to a significantly degree the large intestine are organs of absorption and secretion. Absorptive processes are predominant in villi whereas secretory processes are predominant in the crypts.

Around 9 liters of fluid enters the adult small intestine a day, 2 L contributed by diet and the rest salivary and other alimentary secretions.

75% of this volume is absorbed in the small intestine and almost all the rest in the large intestine, so that only an average 150—200 ml fluid is excreted in normal adult stool.

Sugars(glucose and galactose) and amino acids are absorbed across the small intestine brush border membrane via carriers that couple their movements to that

of Na.

Na coupling permits the organic solute to be transported up hill ,ie, from low luminal to higher cell concentration, a gradient opposite to that of

Na. The organic solutes then move downhill from enterocytes to blood via basolateral membrane carriers that operate independently of ion movements.

The Na gradient, therefore is the driving force for amino acids, oligopeptides and sugar absorption. As these organic solutes are absorbed, salt is absorbed

with them and water follows osmotically—transport from enterocyte to lateral intercellular space creates a local osmotic gradient that initiates water flow to equilibrate the relative tonicity of ECF and vascular fluid.

Water transport across the intestinal mucosa is passive.

Active absorption of nutrients is the force that maintains active pressure on this positive osmotic gradient across the intestinal mucosa in the normal gut physiology, especially glucose-coupled sodium absorption. Glucose-coupled sodium absorption occurs at special carrier sites in the epithelial membrane's brush border, where the two molecules are bound together and drawn into the epithelial cell in a 1:1 molar ratio by a negative concentration and electrochemical gradient resulting from low intracellular sodium. This low concentration of intracellular sodium—and therefore the "pull" on intraluminal

sodium—is maintained by an active, ATP-dependent, homeostatic pump forcing sodium into the ECF. Glucose moves into the ECF across the basal membrane due to a positive osmotic gradient. Both galactose and amino acids also coupled to sodium and taken up at the carrier sites.

As sodium is actively pumped into the ECF .a positive electrochemical and osmotic gradient is created that pulls water, chloride and other electrolytes out of the epithelial cell as well.

The coupled transport of Na and organic solute is the theoretical basis for oral rehydration therapy.

Pathogenetic mechanisms of diarrhea

- 1) Interruption of normal cell transport process.
- 2) Decrease in the surface area available for absorption which may be due to shortening of bowel or mucosal diseases.
- 3) Increase in intestinal motility.
- 4) Presence in the intestine of large amounts of unabsorbable active molecules.
- 5) Abnormal increase in gastric or intestinal permeability leading to increased secretion of water and electrolytes.

NB: a given disease process may cause diarrhea by more than one mechanism

Classification of diarrhea :

1) According to duration

a-acute(less than 2wks)

b-chronic(more than 2 wks)

2) According to mechanism of diarrhea

a-osmotic, e.g. lactose intolerance

b-secretory, e.g. cholera

c-mixed secretory-osmotic ,e.g. Rota virus

d-mucosal inflammation, e.g. Invasive bacteria

e-motility disturbance.

3) According to etiology

a-infectious(viral bacteria .protozoal)

b-non-infectious(malabsorption due to celiac disease,,...)

4) According to clinical type of diarrhea:

a-acute watery diarrhea

b-acute bloody diarrhea

Risk factor of gastroenteritis:

1-enviromental contamination and increased exposure to

Entero- pathogens.

2-young age

3-immune deficiency

4-malnutrition

5-lack of breast feeding

6- measles

7-attendance to day care center

8-poor maternal education

Clinical manifestation of GE :

History of (H/O) passage of loose, frequent watery stool with or without mucous &/or blood of variable duration, foul(offensive) or not smelling, may associated with abdominal pain, cramp or tenesmus, or fever, or vomiting of variable colour ,amount ,frequency, and variable duration

Associated symptoms:

H/O running nose, fever, crying, earache, ear discharge (AOM)

H/O respiratory difficulty with cough, fever (pneumonia)

H/O changing sensorium, convulsion (meningitis)

H/O drug intake e.g laxatives .ampicilline

H/O change in colour and amount of urine with dysuria (UTI)

H/O previous gastroenteritis(post-enteritis syndrome)

H/O onset with introduction of wheat (celiac disease)

Detailed H/O nutrition and diet ,breast ,bottle or mixed, method of sterilization, food habits, appetite ,activity ,sleep are of uppermost important questions

Family H/O similar illness(inherited lactase deficiency)

Home sanitary conditions and water supply, sewage disposal are also important

Ask about thirst and urine output

Examination directed to

a- assess the degree of dehydration through:

- Conscious level
- Anterior fontanel
- Heart rate
- Mucous membranes
- Tears
- Sunken eyes
- Skin turgor(elasticity)
- Capillary refill
- Weight

- Urine output
- Blood pressure
- Breath pattern

b-signs of other systemic involvement e.g.ear drum examination

Diagnosis of GE is based on

a) clinical recognition

b) an evaluation of it's severity by rapid assessment

c) confirmation by appropriate laboratory investigation

Clinical assessment of dehydration :

	Mild dehydration	Moderate dehydration	Sever dehydration
Ask about			
Diarrhea	<4 liquid stool/day	4-10 liquid stool/D	>10 liquid stool/D
Vomiting	none	Small amount	Very frequent
Thirst	normal	Greater than norm	Unable to drink
Urine output	normal	Small amount/dark	No urine for 6 hour
Fit			
Look at			
Appearance	Well & alert	Fatigued, restless	Lethargic, comatose
Eyes	normal	Slightly sunken	Deeply sunken

Microscopically: Pus
 cells(fecal leukocytes)- bacterial invasion, shigellosis RBCs, monilia
 ,parasites (E.histolytica. G.lambliia)- trophozoite or cyst, fat droplets,
 undigested food particles,...

Biochemical: PH
 and reducing sustances, stool
 electrolytes (Na⁺,K⁺,Cl⁻)

Stool culture: not routinely done because of difficulty to differentiate
 between pathogenic strains and non-pathogenic strains of intestinal
 bacteria.

- Indications of stool culture:
- 1- bloody diarrhea-shigellosis
 - 2- suspected vibrio cholera
 - 3- sever persistent symptoms
 - 4- recent travel to developing country
 - 5- research studies
 - 6- help in determine antibiotic sensitivity

Serological studies:
 Agglutination test-Rota virus in epidemics,
 Polymerase chain reaction(PCR)for detection of bacterial antigens

2-Blood Complete
 blood count (CBC),differential, blood culture e.g.bandemia > 15% of
 total WBCs, sepsis, DIC,HUS,

Biochemical:

Serum electrolytes;
Na+ signifies type of dehydration (isotonic ,hypotonic ,hypertonic)
K+ usually low(hypokalemia)
Cl- for calculation of anion gap(eg DKA), low CL-level
PH/CO2-acid-base derangement
BUN/Creatinine-base line for monitoring,warns unsuspected renal impairment (acute tubular necrosis, obstruction, infection, hemolytic uremic syndrome) Osmolarity-
direct measurement of tonicity of body water Glucose-
may be low with enteric losses ,often elevated in hypernatrimic dehydration, diabetic ketoacidosis
Calcium-sometimes depressed in hypernatrimic dehydration
Blood culture-any patient in shock

3-Urinalysis (GUE)

				Color
Pus cells-UTI				Volume
flow/minute				Specific
gravity(SG)	if	<	1025-consider	concentration defect
PH-renal			tubular	acidosis
Glucose-diabetes				Ketones-
diabetes or poor intake				Culture-
UTI,PN				Amino

acids and ferric chloride-inborn error of metabolism presenting as enteritis

Differential diagnosis of gastroenteritis

1-Systemic infections: septicemia, meningitis

2-Local infections: respiratory tract infection, otitis media, hepatitis, urinary tract infection

3-Surgical disorders: pyloric stenosis, intussusception , acute appendicitis, necrotizing enterocolitis , Hirschsprung's disease

4-Metabolic disorders: diabetic ketoacidosis ,congenital adrenal hypoplasia, inborn error of metabolism,...

5-Renal disorders: hemolytic uremic syndrome

6-Others: celiac disease, cow's milk protein intolerance,

7-poisoning, food poisoning, salicylate poisoning,...

Treatment of GE :

TREATMENT OF DIARRHOEA

Step-1 : Assessment of dehydration ,and ask for symptoms and look for signs indicating other problems

Step-2 : Select treatment and treat appropriately for degree of dehydration and Rx for any other problems

Step-3 : Advice family members about home treatment and prevention of diarrhea

Degrees of Dehydration

From treatment point of view, dehydration is usually classified as :

- No dehydration,
- Some dehydration and
- Severe dehydration.

<p>Some Dehydration When symptoms and/or signs of dehydration are present.</p> <p>Severe Dehydration In the presence of shock and lethargy it is referred to as severe</p>
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IMNCI System

Diarrhoea Treatment Instructions

<p>If the child has two or more of the following signs she has SEVERE DEHYDRATION:</p> <ul style="list-style-type: none"> • Lethargic or unconscious • Sunken eyes • Not able to drink or drinking poorly • Skin pinch goes back very slowly. 	<p>If the child has two or more of the following signs she has SOME DEHYDRATION:</p> <ul style="list-style-type: none"> • Restless, irritable • Sunken eyes • Drinks eagerly, thirsty • Skin pinch goes back slowly. 	<p>No dehydration</p>
<p>Refer urgently to a hospital for treatment of severe dehydration. If the child is able to drink, give frequent sips of ORS on the way.</p>	<p>Treat some dehydration with ORS Provide home care</p>	<p>Provide home care</p>

given as soon as dehydration have resolved, but not before until diarrhea cease. 100 ml of ORS/kg/24 hours or (10 ml/kg after each loose stool) ,for older children they can take ORS as much as desired

mild dehydration 100 ml/kg within 24 hours

moderate dehydration 100 ml/kg within 24 hours

ORS should be given slowly, especially if they have emesis. initially by dropper ,teaspoon, cup ,or syringe (not by bottle),beginning with as little as 5 ml at a time.

Small amounts of ORS should be given to infant every few minutes, best way 2—3 small spoonful from a cup, wait 2---3 minutes, then give some more.....

Vomiting may occur during administration of ORS, this should not prevent successful oral rehydration by slow, small amount at short interval

ORS amount should equal stool volume. if stool volume cannot be measured, intake of 10-15 ml of ORS/kg/hr is appropriate.

After ORS, if the infant on breast milk, continue feeding with breast milk, but if he is on bottle feeding give him 1/2 concentrated over 12 hours and then ↑ strength till reach full strength over 12 hours.

Cereal-based oral rehydration fluids can also be advantageous in mal nourished children and can prepared at home remedies including decarbonated soda beverages ,fruit juices and tea are not suitable for

rehydration or maintenance therapy as they have inappropriately high osmolalities and low sodium concentrations.

The continued enteral feeding in diarrhea is problematic because the intestinal brush border surface and luminal enzymes are affected causing variable degrees of CHO, protein and fat malabsorption.

Breast feeding or non-diluted formula?(controversy) should be resumed as soon as possible

Fatty foods or foods high in simple sugar should be avoided

For lactose intolerance, treatment strategies:

1-use of lactose free formula or

2-addition of milk to cereals or

3-replacement of milk with fermented milk products; yoghurt

Causes of bloody diarrhea :

1-Amoebiasis

2-Shigella dysentery

3-Necrotizing enterocolitis(NEC)

4-Pseudomembranous enterocolitis due to C difficile

5-Intussusception, red current jelly stool

6-Inflammatory bowel diseases(Chron'S,UC)

Flu

7-Inflammatory colitis or enteritis as in cow's milk

intolerance

8-Miscellaneous (polyps, Meckel's diverticulum, bleeding tendency)

Complication of gastroenteritis :

1-Acute renal failure c/f: UP & azotemia (BUN & Creatinine), K Rx adequate hydration UP 0.5 ml/kg/hr indicate good renal function and cardiac output

2-Electrolyte disturbances: hyponatremia, hypernatremia, hypokalemia, hypocalcaemia

3-Metabolic acidosis

4-Malnutrition and failure to thrive

5-Post-gastroenteritis syndrome: disaccharidase (lactase) deficiency, temporary due to damage of brush border of intestine.

6-Shock

7-Disseminated intravascular coagulation (DIC)

8-Venous thrombosis

9-septicemia

10-complications of IV fluid:

a) overhydration: pulmonary oedema, cerebral oedema
.congestive heart failure

- b) thrombosis or air embolism
- c) infection, clot around tip of canula & cellulitis
- d) brain oedema
- e) electrolyte disturbances: hyperkalemia, hypoglycemia

11-Convulsion :

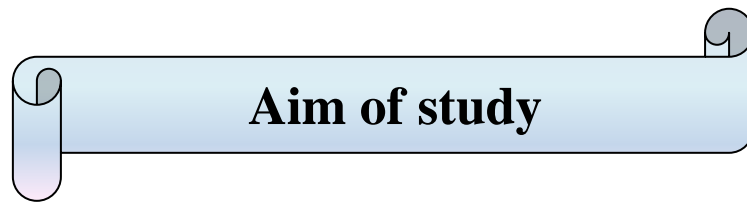
Before treatment

- a- febril convulsion (fever of dehydration or of sepsis)
- b- electrolyte imbalances eg hypernatremic dehydration, shrinkage of brain
- c- thrombosis of saggital sinus because of haemoconcentration

After treatment

- a- cerebral edema due to rapid rehydration
- b- hypocalcemia

12-Post-infective irritable bowel syndrome



Aim of study

To shed some light on the epidemiological and clinical aspect of gastroenteritis among children admitted to Bint-Alhuda maternity and children teaching hospital – 2021 .

Patients and methods

A prospective study carried out in children with diarrhea admitted to Bint alhuda maternity and teaching hospital (MCTH) thi qar during period july 2021 to January 2022

For each cases following informations were obtained from patient's mother according to questionnaire of study

Age and sex

Residence

Diarrhea (frequency ,consistency and bloody stool)

Associated symptoms respiratory convulsion genitourinary

History of antibiotic use

History of the previous attacks of gastroenteritis

Type of feeding (breast , bottle , mixed , ordinary die)

Social history

All patients examine for

Vital signs

Groth parameters weight and plotted on growth chart

Degree of dehydration

the investigation where people review examination

blood test

General examination

stool culture

ultrasound, x-ray if needed

diarrhea defined as frequent loose bowel motion more than 5 times in day with or without vomiting

Result

Total number of diarrhea cases in the period of the study was 155 of which 97 (62.5%) patients were male and (37.4%) patients of female as shown table and figure

The peak diarrhea cases was recorded in infants below (1Year of age) and reaches 122 cases (78.7) as shown in table 2 and figure 2

The commonest clinical symptoms diarrhea and vomiting were present of 92.2% and 65.8% respective and the common associated symptoms was fever (78.8) followed by genitourinary symptoms (15.4%) as shown in table figure 3

Concerning the residence 92(59.3%) of the cause were urban area and 63(40.6%) cause were rural area .as shown in table _4, Figure 4

Regarding the effect of type feeding on diarrhoea .The bottle feeding group show increase in incidence of diarrhoea 82(52.9%).table 5.Figure 5.

Interestingly the number of diarrhoea cause were higher among well nourished infants 109(70.3%).

concerning the causative against the diarrhea the parasitic infection was the most common one 94 (60.6%) *E.Histoltica*, 66 (39.4%) unknown as in table and figure 7.

Tables and figures :

Table 1 : distribution of GE cases in relation to sex

sex	NO.	Percentage
Male	97	62.5 %
Female	58	37.4 %
Total	155	100 %

Figure 1 : sex distribution of GE .

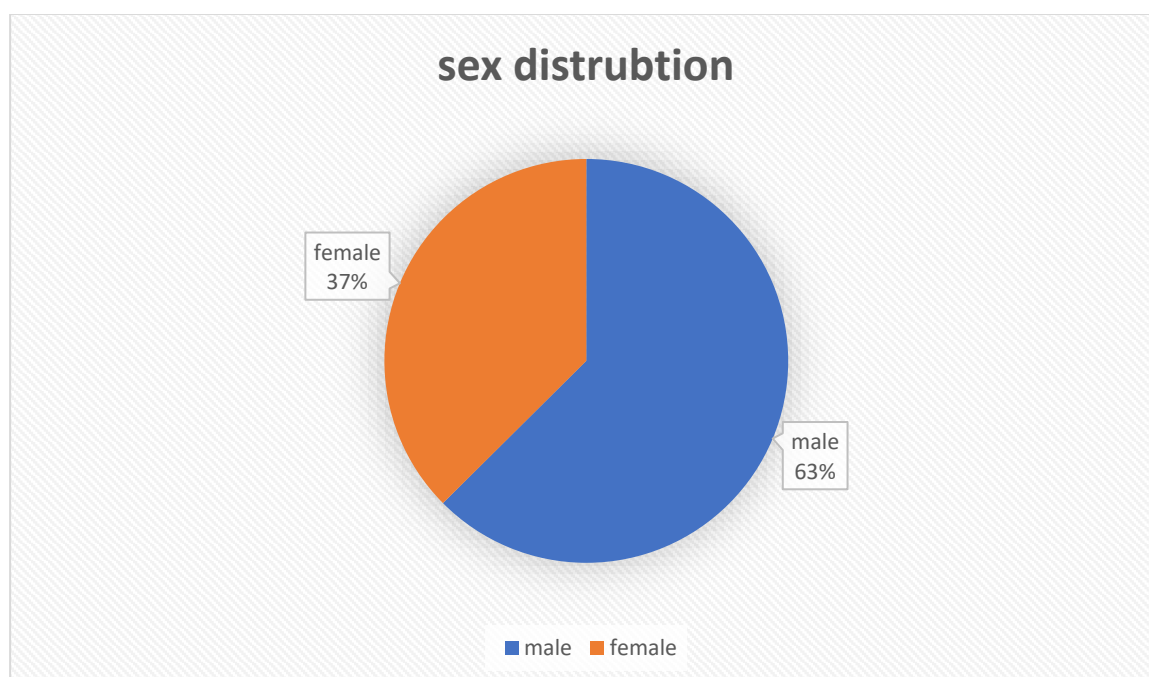


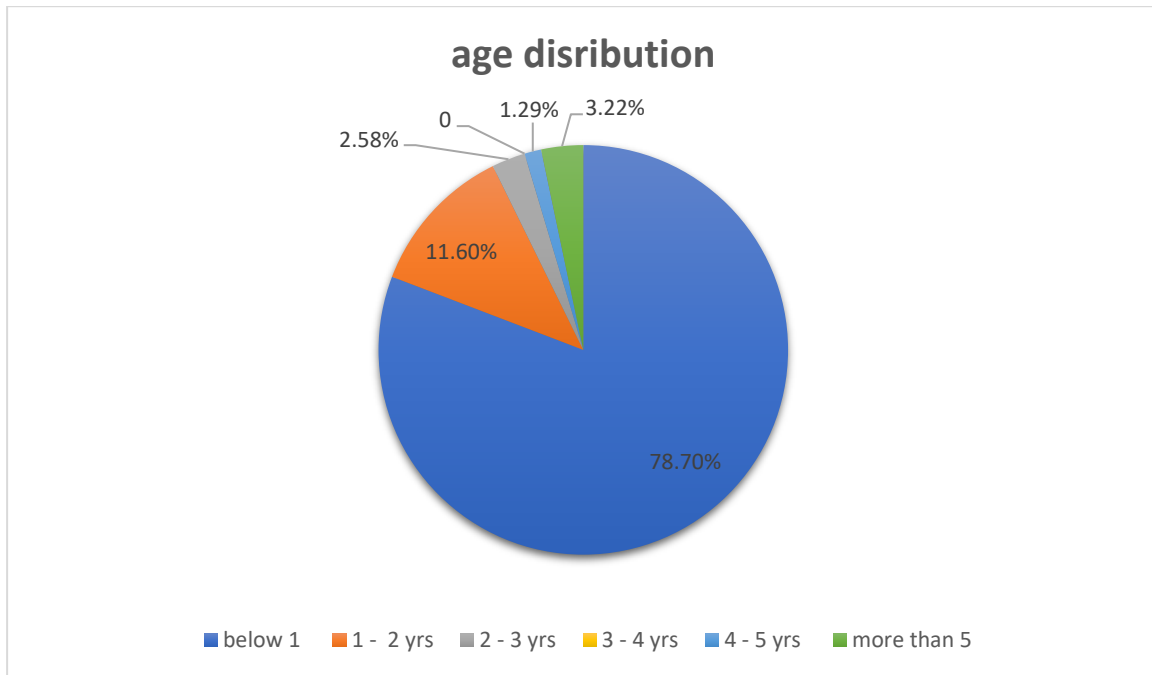
Table 2 :

Distribution of GE cases according to the age .

Age	NO.	Percentage
below 1 year	122	78.7 %
1 - 2 year	18	11.6 %
>2 – 3 year	4	2.58 %
>3 – 4 year	0	0

>4 – 5 year	2	1.29 %
>5 year	5	3.22 %
Total	155	100 %

Figure – 2 – :



Age distribution of GE cases

Table – 3 –

Distribution of clinical symptoms among children with GE :

Clinical symptom	NO.	%
Diarrhea	143	92.2 %
Vomiting	102	65.8 %
Fever	122	78.7 %
Respiratory symptoms	67	43.2%
Rash	16	10.3 %
Genitourinary symptom	24	15.4 %
Convulsion	8	5.16 %

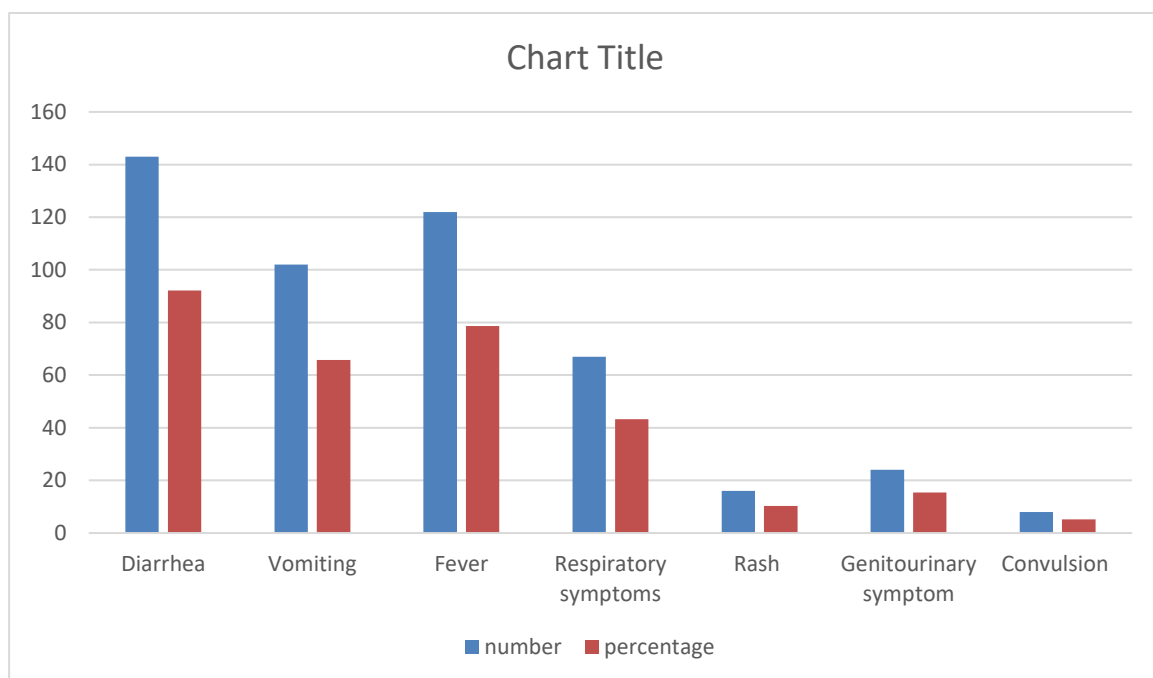


Table – 4 –

Distribution of GE according to residence

Residence	NO.	%
Rural	63	40.6%
Urban	92	59.3 %
Total	155	100 %

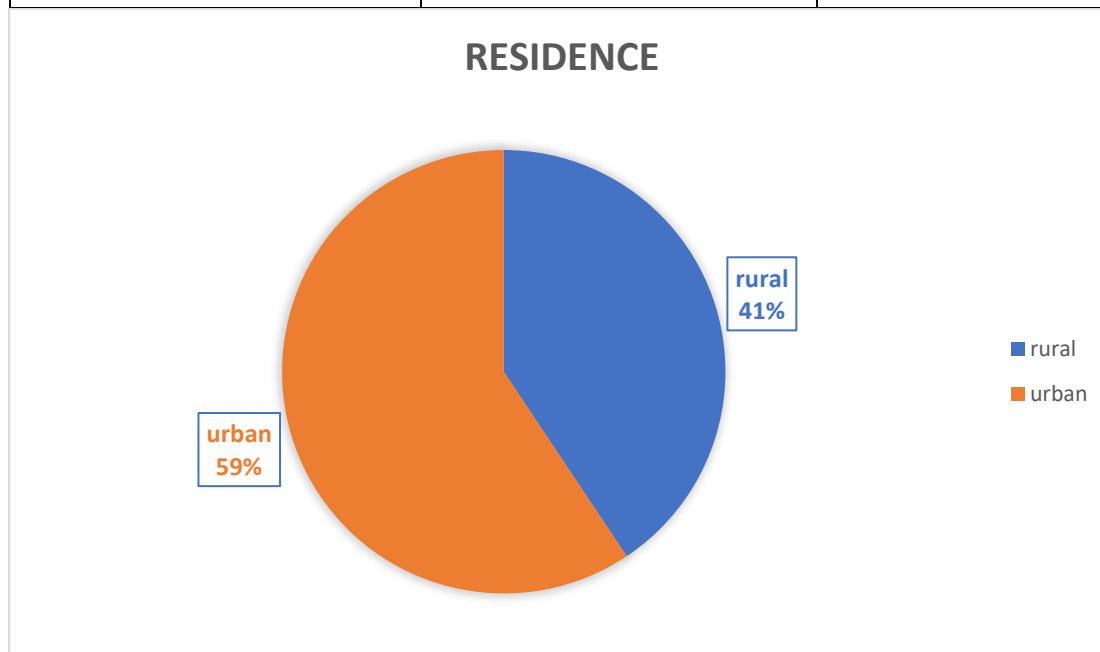


Table – 5 –

Distribution of GE cases ACCORDING TO THE FEEDING PRACTICE :

Type of feeding	NO.	%
Breast feeding	13	8.38 %
Bottle feeding	82	52.9 %
Mixed feeding	45	29.03 %
Ordinary diet	14	9.03 %
Total	155	100 %

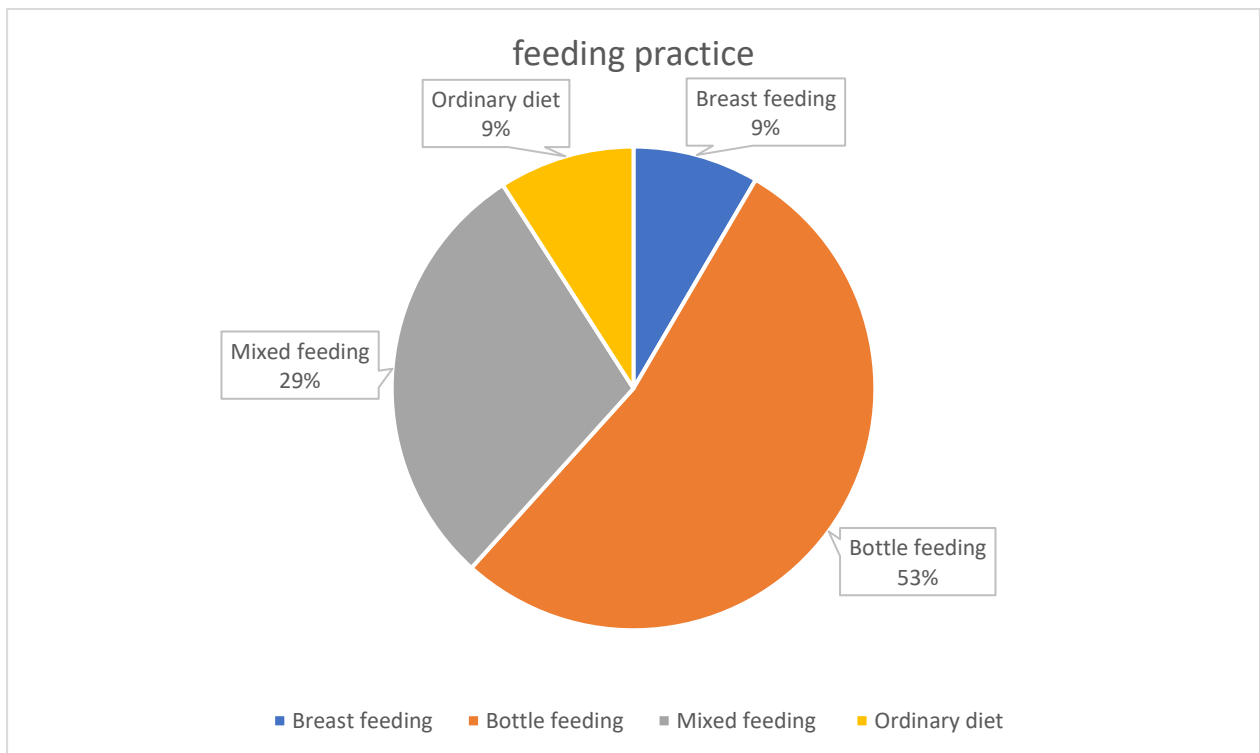


Table – 6 –

Distribution of GE according to the nutritional status:

Nutrition state	NO.	%
Well nutrition	109	70.3 %
Mal nutrition	46	29.67 %
Total	155	100 %

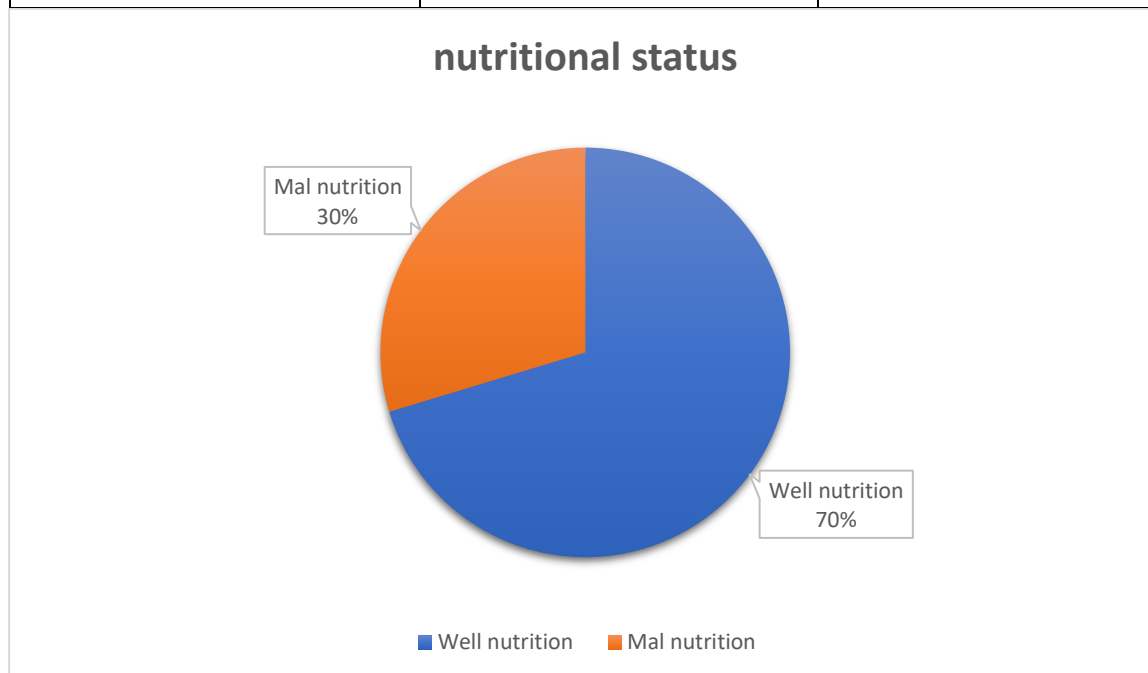
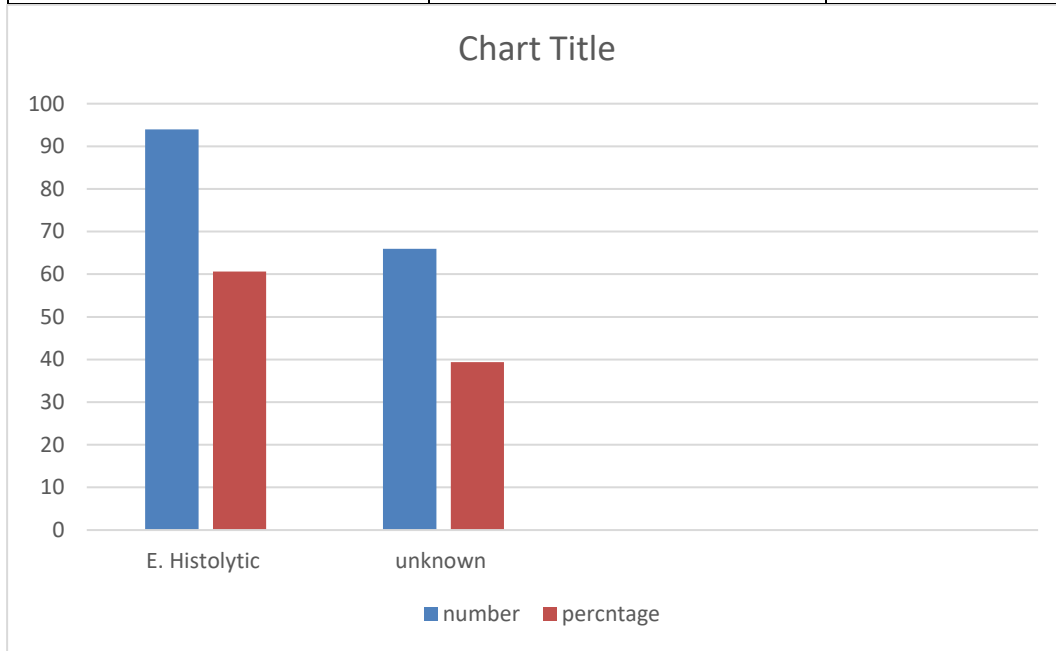


Table – 7 –

Distribution of GE cases according to the parasitic infections :

Parasitic microorganism	No. infected	%
<i>E. Histolytic</i>	94	60.6%
unknown	66	39.4 %
Total	155	100 %



Discussion

The result showed the highest percentage for diarrheal cases. this result correlate with those of the previous studies by Chow et al., (2010) found the diarrhea is one of the main causes of morbidity and mortality in children younger than 5 years of age, in developing countries(1).

Worldwide, the infectious diarrhea continues to be a health problem, especially in the children they living in developing countries. In these regions it is estimated and responsible for 2.5 million infant deaths annually, with mortality rate of 4.9 per 1,000 children and the annual incidence of 3 episodes per child among the children less than 5 years of age (2)

The most diarrheal episodes in this study occur during the first 2 years of life this accepted with other studies such as Bryce(2005),the diarrhea incidence is highest in the age group 1-2 year, when their weaning often occurs this pattern reflects the combined effects of declining levels of maternally acquired antibodies, the lack of active immunity in the infant, the introduction of food that may be contaminated with fecal bacteria and direct contact with human or animal faeces when the infant starts to crawl. Most enteric pathogens stimulate at least partial immunity against repeated infection or illness, which helps to explain the declining incidence of disease in older children and adults(3).

In Iraq, in accordance to report by (WHO, 2003) that diarrhea with ALRI account 70% of childhood deaths frequently, due to poor water supplies both in terms of quality and quantity; insufficient, poorly maintained sanitation facilities and sanitation services; and overcrowding(4).

According to the annual report of the Iraqi Ministry of Health (M.O.H) in Iraq, the average of diarrheal patients visiting the medical and health care facilities related to M.O.H for the years 2009 and 2010 is 201 and 212 / 1000 child under five years of age. Also, it is estimated that the percentage of diarrhea cases to the

total pathological cases requiring hospitalization in children less than five years of age is 19.1 % for the year 2009, and 24.9 % for the year 2010 (5).

In spite of recent advances in public health and sanitation ,diarreal disease continues to be major cause of montality and mortality in infants and children.(6)

The highest rates of diarrhea occurs in infants less than one year of age. The same age pattern was obtained a prom on U.K. hospitals children less than 1 years age reflect parrent concern and Doctor awareness repeat such young children may deteriorate (7).

The study showing in threes number of diarrheal disease between bottle feeding (52.9 %) compare with those breast feeding (8.38 %) same results in Iraq and other countries explained by protective meachanism of breast milk and immunological and antimicrobial value ,and protective meachanism of breast milk reflect at same time in mortality rate which was significantly associated with bottle fed children.

In the present study *E. histolytica* was found to be common in infants and children examined confirmed by previous workers among various groups in Iraq and Egypt. The occurance of parasite intestinal protozoa *E histolytica* and *Giardia lambilia* among young children may reflacted not only by sanitary condition but also propability the transmission of parasite may reflacted fecal contamination hands in family food handles may contribute to parasite transmission ,such contamination together with abundance of house flies are propably the main factors responsible for prevalence of parasitic infection in children(8).

The male predominance could be explained on the basis was generally more male admitted to hospital than female and this could be attributed the social factors on parents react more toward affection of male than female (9).

Conclusions

- 1- diarrheal disease continues to be a major problem particular in children younger than 2 years of age
- 2- Breast milks waned to provide protection against gastroenteritis, in contrast to high incidence of gastroenteritis, among bottle fed infants
- 3- -the most common protozoa infectious agent of diarrhea in us study was *E.histolytica*
- 4- Good water sanitation have direct on morbidity of gastroenteritis
- 5- -the percentage of diarrhea cases in male was more than that in females
- 6- diarrheal cases was from urban areas higher than from rural areas

Recommendations

- 1- Encouragements of breastfeeding as early from colostrum give protection against gastroenteritis .
- 2- Education of mothers oral rehydration fluid at home as soon as possible to avoid or reduce significant dehydration.
- 3- To educate reinforce the scientific way in rehydration of patients with diarrhea and avoid unnecessary using of intravenous fluid and antibiotic in our community.
- 4- the health education programs should include the importance of breastfeeding and suitable time of weaning Foods.
- 5- comparative study the pathogen ex. Rotavirus , bacterial pathogens with our causative agents , by using stool culture or serological test like latex agglutination .

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Questioner form

Data

Name:

Sex : male , Female

Residence Rural Urban

Age : month, year

clinical Presentation

1- Diarrhea , Frequency , bloody stool

2- Duration of diarrhea in Days

3. Associated symptoms:

Vomiting , Fever , Respiratory symptom , convulsion

Genitourinary Symptoms , skin rash , history of antibiotics Prior to GE .

4. History of prev. attack of GE, Yes , No

5-Type of Feeding: Breast , bottle , mixed , ordinary diet .

6- Social history: | Type of water Supply : River , Pipes , RO.

Examination

weight in(kg) , Plotting on Growth Chart centil

Degree of Dehydrations : mild , Moderate , Sever

Investigations

1-Stool examination:

Macroscopically : Mixed with blood ; yes , No

Microscopically: Leukocyte , rbc , monellia ,

Trophozoite , cyst if + mention the name The parasite .

2-stool Culture; if done negative , Positives

If + mention the name of the bacteria

3. Other investigation : ultrasound if done Yes , No

Abstract in arabic

دراسه سريريہ مستقبلية اجريت على 155 طفل يعانون من التهاب الامعاء الحاد الى مستشفى بنت الهدى التعليمي للولادة والاطفال خلال الفتره تموز كانون الثاني غرض من الدراسه هو تسليط الضوء على العوامل السريريہ والوبائيہ لمرض التهاب الامعاء الحاد لدى الاطفال الدراسه ان عدد الذكور كان اكثر من عدد الاناث وبنسبة 63% و 37% على التوالي و ان الفئه العمريہ اقل من سنه واحده في الاكثر حجما في عدد المصابين وبنسبة 78.7%.

لقد وجد ان اعظم المصابين بالتهاب الامعاء الحاد مع ان من اسهال وبنسبة 92.2% وتقيؤ بنسبة 65.8% و حمى بنسبة 78.7%

و تبين ان حليب الام له حمايه ضد التهاب الامعاء الحاد فقد وجدت فروقات معنويه في نسبة الاصابه للاطفال الذين يستخدمون حليب الام للاطفال بنسبة 8.38% والاطفال الذين يستخدمون الرضاعه الاصطناعية 52.9%

و لم تسجل حاله وفاه خلال فتره البحث.

مفاتيح الكلمات: التهاب الامعاء الحاد, مستشفى بنت الهدى للولادة والاطفال

جمهورية العراق
وزارة التعليم العالي والبحث العلمي
جامعة ذي قار
كلية الطب



انتشار التهاب المعدة والأمعاء بين الأطفال الذين تم إدخالهم إلى مستشفى بنت الهدى التعليمي للولادة والأطفال بذي قار عام 2021

بحث تخرج مقدم إلى مجلس كلية الطب ، جامعة ذي قار ، في استيفاء
متطلبات درجة البكالوريوس في الطب

من قبل

مصطفى رعد، زهراء كريم، زهراء حسن، زهراء جواد

بإشراف

أ.د. مؤيد ناجي مجيد

