

Community Medicine

Control of Communicable disease (7)

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Intestinal infection (Acute diarrhea diseases)

Out line :

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Introduction

- Diarrheal diseases are leading cause of childhood morbidity and mortality in developing countries.
- Children(less than 5 years) may experience 3-4 episodes/ year is the commonest .
- About 3.2 million death occur each year among children less than 5 years because of diarrheal diseases. About 80% death in the first 2 years and 30% of infant death in developing countries. Diarrheal diseases contribute largely to childhood malnutrition.

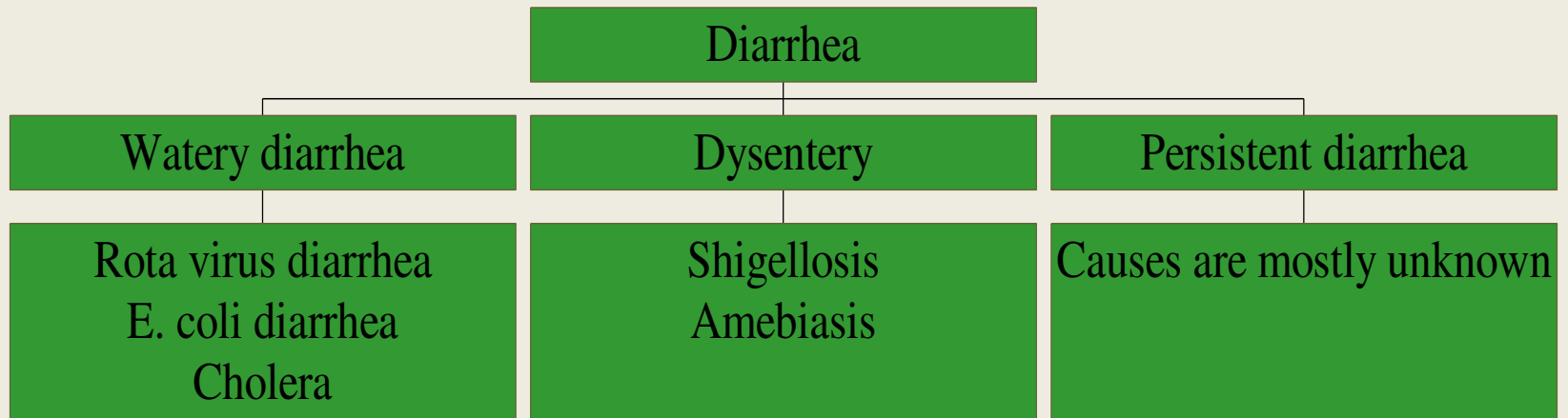
DEFINITION

- Watery Diarrhea: 3 or more liquid or watery stools in 24 h
- Dysentery: Presence of blood and/or mucus in stools
- Persistent Diarrhea: Diarrhea lasting for 14 days or more

ETIOLOGY

- **Most cases** of acute infectious gastroenteritis are probably viral, in most studies, stool culture has been positive in only 1.5 to 5.6 percent of cases.
- In contrast, bacterial causes are responsible for most cases of **severe diarrhea**.
- Protozoa are less commonly identified as the etiologic agents of **acute gastrointestinal illness**.

TYPES OF DIARRRHEA



Differences between acute watery and persistent diarrhea

Acute watery diarrhea	persistent diarrhea
Sudden onset Lasts <14 days Watery stool No visible blood Fever Vomiting Rota V., E Coli, Campylobacter Self limited disease Sever dehydrations	Acute / insidious خبیث More than 14 days Watery Dysentery Stool contain Blood Not common Specific organ/ intestinal damage Malabsorption malnutrition Mild dehdration Impaired growth

Mode of transmission

- Transmission is usually through the faeco oral route.
- Certain behaviours of transmission of enteric pathogens includes:-
- Failing to breast feed exclusively for the first 4-6 months.
- Using infant feeding bottles.
- Storing cooked food uncovered at room temperature.
- Using contaminated drinking water with faecal bacteria.
- Not washing hands after defecation or before handling food
- Lack of sanitary sewage and waste disposal.
- Home fly transmits the infection.

Acute diarrhea that lasts less than 2 weeks is termed.

Persistent diarrhea lasts between 2 and 4 weeks. Chronic diarrhea lasts longer than 4 weeks.

Host factors that increase to diarrhea سهولة التأثر susceptibility

- Age : Most episode occur during the first 2 years of life.
- Failing to breast feed
- Malnutrition.

Prevention and Control of diarrhea

A- Proper breast feeding.

B- Improved weaning practices.

C- Cleanliness.

D- Measles immunization.

Prevention and Control of diarrhea

- A- Proper breast feeding:-

Infant should be exclusive breast fed during the first 4-6 months of life with no other fluids given. Weaning foods may be introduced but breast feeding should be continued at least until 2 years of age.

Prevention and Control of diarrhea

- B- Improved weaning practices :-

1. Proper timing.

2. Suitable choice: foods that are energy rich, nutrition, easily digestible and economically feasible.

3. Adequate amounts and frequency.

4. Hygienic precautions.

Prevention and Control of diarrhea

- C- Cleanliness:-

1. Use clean water for drinking.
2. Wash hands regularly.
3. Control of flies.
4. Proper disposal of sewage.

- D- Measles immunization:-

Treatment of diarrhea

- We should assess the patient to detect to which group A,B,C patient belongs and what plan of treatment:-

Assess the patient	A	B	C
1)Look at Condition	WELL ,Alert	Restless ,Irritable	Lethargic نواامي ,Comatosed
Eyes	Normal	Sunken	Very Sunken
T ears	Present	Absent	Absent
Mouth , Tongue	Moist	Dry	Very dry
Thirst	Not thirst	Eagerly drinks	Not able to drink
2)Feel skin pinch	Goes back quickly	Goes back slowly	Goes back very slowly
3)Decide	The patient has no signs of dehydration	The patient has some dehydration.	The patient has severe dehydration.
4) Treatment	Plan A	Plan B	Plan C

1-Plan A (treatment of diarrhea at home):-

- Three rules for treating diarrhea at home:-
- Give the child more fluids than usual as soon as diarrhea start to prevent dehydration with continuous breast feeding.
- This fluid as rice water, tea without sugar, Soup, Yoghurt, ORS.
- Give the child plenty of nutritious food to prevent malnutrition.
- Take the child to the health unit if :-
 - 1.Child does not get better in 3 days.
 - 2.Passage of many water stools.
 - 3.Blood in stools.
 - 4.Repeated vomiting
 - 5.Failure to eat or drink normally.
 - 6.Fever.

2-Plan B(management of patient with some dehydration):-

- Children with signs indicating some dehydration usually don't need to be admitted to hospital. They can be treated in rehydration center in a healthy facility.
- The main tasks of plan B are as follows:-
 - 1.ORS solution to be given during the first 4 hours.
 - 2.Rehydration according to the weight of the body (Oral Rehydration **Solution**).
 - 3.Continue breast feeding and give other fluid required.
 - 4.Monitor treatment and manage any difficulty during oral rehydration is completed.
 - 5.Assess the child periodically until rehydration is completed.
 - 6.Give instruction for treatment at home after rehydration is completed following **plan A**.

3-Plan C(management of patient with severe dehydration):-

- Children with severe dehydration should be treated urgently to avoid death from hypovolemic نقص حجم الدم shock.
- The treatment should be undertaken in hospital by experienced personnel.
- The main task of **plan C** are as follows:-
- Give appropriate amount of I.V. fluids.
- Shift to **plan B** or **A** when the child is no longer severely dehydrated.

Indication of I.V. fluid therapy:-

- Severe dehydration.
- Failure of ORS.
- Paralytic ileus انسداد الأمعاء or severe abdominal distention.

Indication of antimicrobial therapy in diarrhea:-

1.Diarrhea caused by specific pathogens such as Cholera, Shigella ,amaebiasis.

2.Associated bacterial infections as Pneumonia or Otitis media.

**Thank
you**