

Acute Watery Diarrhea (AWD)

- Definition of diarrhea
- Pathophysiology
- Clinical features
- Assessment
- Management
- Complication

Objectives

Be able to

- Define Diarrhea
- Outline pathophysiology of diarrhea
- Identify different levels of dehydration
- Calculate fluid requirements
- Replace ongoing loose stools
- Confidently manage diarrheal patients

Definition of Diarrhea

- “Passage of three or more abnormally loose/watery stools in 24 hours.”
- “Diarrhea acute in nature is called acute watery diarrhea”

WHO definitions

Pathophysiology of Cholera

- Sufficient number of bacteria must be ingested
- Called the “infective dose”
- 10 million of v. cholera (01)
- Bacteria multiply in the intestine
- Produces ‘toxin’— causes decreased absorption of sodium, increased secretion of chloride and thus increased secretion of water
- Patient finally starts to pass watery stools and vomiting

Clinical Features

Signs/Symptoms

- **Symptoms or Complaining Of:**

Passing of rice watery stool, effortless vomiting, abdominal pain, muscle cramps, feeling of thirst, weakness

- **Signs:**

Irritable, less active, lethargic, comatose , sunken eyes, dry mucosa, skin turgor reduced, weak radial pulse, weakness, or absent/uncountable radial pulse, washer man sign, cold clammy skin

Types of Diarrhea

Three types of diarrhea

- 1. Acute watery diarrhea**
- 2. Invasive Diarrhea**
- 3. Persistent diarrhea**

Assessment – Dhaka Method

Assess	Condition	Normal	Irritable/ less active	Lethargic/ comatose
	Eyes	normal	Sunken	
	Mucosa	normal	Dry	
	Thirst*	normal	Thirsty*	Unable to drink*
	Skin Turgor*	normal	Reduced*	
	Radial pulse*	normal		Uncountable or absent*
Diagnosis		<u>No sign of de-hydration</u>	If at least 2 signs Including one (*) sign present, diagnosis = <u>Some Dehydration.</u>	If some dehydration plus one (*) sign present, diagnose = <u>Severe dehydration</u>

Management of AWD

Plan A

- No sign of Dehydration;
- Fluid deficit 0 - 4% of body weight
- To Prevent Dehydration, ORS and home fluids include – breast milk, juice, water, normal foods
- **Infants**
- 0-6 Mo - Glucose or sugar based ORS
- 7 Mo+ - Rice ORS recommended

Management of AWD

Plan B

- Some dehydration
- Fluid deficit 5-10% of body weight
- Management in two phases
 - 1) Rehydration phase
 - 2) Maintenance phase
 - ~80 ml/kg BWt over 4 – 6 hrs
 - In maintenance phase ORS solution preferred; if severe vomiting, IV fluids recommendation.

Management of AWD

Plan C

- Weight the patient first
- IV **isotonic fluid** – Cholera saline, Ringer's lactate or normal saline recommended
- In severe dehydration, start IV fluid soon as possible
- 100ml of IV fluid/kg body wt
- Start ORS after initial hydration or as early as patient can drink

ORS Composition

1 Packet Glucose ORS (dissolved in 1/2 liter) contains following components:

- Sodium Chloride- 1.30 g
- Potassium Chloride- 0.75 g
- Tri sodium citrate- 1.45 g
- Dextrose anhydrase- 6.75g

Body Fluid Loss and Replacement

- No sign of dehydration – $<4\%$,
- Some sign of dehydration – $4\% - 10\%$,
- Severe sign of dehydration – $>10\%$.

Age	First 30ml/kg	Then 70ml/kg
Infants	In 1 st hour	Next 5 hrs
Older	In 30 min	Next 2.5 hrs

Treatment

- Antibiotic is dependent on culture/sensitivity of micro organism
- Syrup-Azithromycin 20mg/kg body wt as single dose for children (in ICDDR, B)
- Tab-Zinc Acetate 20 mg for 10 consecutive days (from 6 mo to 2 yrs)
- Tab-Azithromycin 1gm single dose (for adult)

Complications

- Electrolyte imbalance
- Death due to fluid deficit or hypovolemic shock
- Acute renal failure due to delayed hydration

Dietary Advice

- 0-6 mo – continue exclusive breast feeding
- 07 mo to 2 years – continue breast feeding plus complementary diet
- Adult – normal family diet