

Case management of Cholera and ETEC

Clinical case definition: acute watery diarrhoea with or without vomiting, with or without severe dehydration

Laboratory criteria: Isolation of *Vibrio cholerae* O1 or O139 or Enterotoxigenic E Coli from stools

Watery diarrhoea and vomiting can result in rapid loss of fluids and salts, which could be manifested in dehydration, acidosis and potassium depletion. The treatment of a suspected cholera case and other cause of acute watery diarrhea should always be started with oral rehydration therapy as soon as possible. The clinical condition of the patient should be monitored during the treatment until diarrhoea stops. Mild cases of cholera/others (nearly 80-90% of the patients) can be treated with oral rehydration salt (ORS) solution alone, without intravenous therapy or antibiotics. Intravenous therapy may be required for patients with severe dehydration.

Steps in the management of suspected cholera and others

Step 1 Assess the patient for dehydration

1. Look at condition of:			
Eyes	Well, alert Normal	Restless, irritable Sunken	Lethargic, unconscious Very sunken and dry
Tears	Present	Absent	Absent
Mouth and tongue	Moist	Dry	Very dry
Thirst	Drinks normally, not thirsty	Thirsty, drinks eagerly	Drinks poorly or not able to drink at all
2. Feel skin, pinch	Goes back quickly	Goes back slowly	Goes back very slowly
3. Decide	<i>No dehydration</i>	<i>Mild dehydration</i>	<i>Severe dehydration</i>

Step 2 Rehydrate the patient and monitor frequently

No dehydration.

Patients with no dehydration can be treated at home. Give ORS packets to take home for 2 days. Demonstrate how to prepare the solution and inform the patient how much ORS solution should be taken:

No dehydration		
Age	Amount of ORS after each stool in ml	Amount of ORS after each stool in cup
< 24 months	50 – 100ml	¼ - ½ cup (Enough for 500ml/day)
2 - 9 years	100-200ml	½ - 1 cup (Enough for 1000 ml/day)
10 years or more	As much as wanted	As much as wanted

Instruct the patients or the care-giver to refer the patient to a health facility if the patient develops any of the following signs: increased number of watery stools, eating or drinking poorly, marked thirst, repeated vomiting, fever or blood in stool.

Some dehydration

Give ORS solution in the amount recommended below **in the first 4 hours**:

Some dehydration						
Approximate amount of ORS solution to give in the first 4 hours						
Age	Less than 4 months	4 – 11 months	12- 23 months	2-4 years	5- 14 years	adults
Weight	Less than 5 kg	5 – 7.9 kg	8 – 10.9 kg	11 – 15.9 kg	16 – 29.9 kg	30 kg or more
ORS solution	200- 400ml	400-600 ml	600-800 ml	800-1200 ml	1200-2200ml	2200-4000 ml

Use the patient's age when you do not know weight

After 4 hours if there are no signs of dehydration, continue to give ORS solution to maintain normal hydration.

Severe dehydration.

Give IV fluids immediately. Use Ringer's lactate solution. If this is not available, use normal saline.

Severe dehydration	
Give IV drips of Ringer lactate	
Children less than one year	More than one year and adults
100ml / kg in six hours Start rapidly :30ml/ kg within the first hour and then slow down)	100ml / kg in three hours Start rapidly :30ml/ kg within the first 30mn and then slow down)

Step 3 Maintain hydration, replace continuing fluid losses until diarrhea stops

When the patient has been rehydrated with IV fluid or ORS solution and is reassessed, if there are no signs of dehydration, continue to give ORS. The aim is to replace stool losses as they occur with an equivalent amount of ORS solution. As a guide, give 100 ml to children less than 24 months, 200 ml to children 2-9 years and as much as required to 10 years or more, after each loose stool.

Step 4 Give an oral antibiotic to the patient with severe dehydration

An effective antibiotic can reduce the volume of diarrhoea and shorten the period of excretion of the vibrio. In addition it will stop the diarrhoea in 48 hours. Antibiotics should be started after the patient has been rehydrated and vomiting has stopped. This usually takes 4-6 hours.

Antibiotic	Children	Adults
Doxycycline – a single dose		300 mg (except pregnant women)
Tetracycline – 4 times per day for 3 days	12.5 mg/kg/day	500 mg
Ciprofloxacin – a single dose per day for 3 days	20 mg/kg/day	250 mg

If you suspect ETEC and others

Antibiotic	Children	Adults
Ciprofloxacin – twice daily for 5 days	20 mg/kg/day	500 mg
Doxycycline – a single dose for 5 days		100 mg

Step 5. Feed the patient

Resume feeding when vomiting has stopped.

Continue breast-feeding infants and young children.

Do not forget

- 1) In health facilities
 - strengthening sanitary and hygiene measures in general
 - implementation of disinfection measures in treatment wards
 - Implementation of special funeral practices
- 2) In affected areas
 - Ensure the access to safe water (quality and quantity)
 - Strengthening of health education on hygiene , disinfection measures and food safety
 - Set up of surveillance for early detection of cholera cases and other causes and monitoring of the outbreak