



Adult Diarrhoea Pathway

Definition

- Passage of loose/watery stools 3+ times in 24 hours

Background

- [Diarrhoeal diseases](#) 4th leading cause of deaths in India overall, number 1 infectious cause of mortality (IHME)
- 632,000 diarrhea deaths (all ages) in 2019
- Greatest burden of diarrhoea deaths in the 70+ age group (385,000)

Local context

- [Antibiotics](#) are [widely used](#) for acute diarrhoea in India amongst both adults and children
 - o However, the majority of acute diarrhoeal syndromes [do not require treatment](#) with antibiotics
- Diarrhoea in adults is not as well studied as in children

What causes acute diarrhoea?

- Diarrhoea can be caused by viruses, bacteria, and protozoa
- Diarrhoea caused by viruses cannot be treated with antibiotics, and bacterial and protozoal diarrhoea often resolves without antibiotic therapy
- CSA performed a systematic review to provide further guidance in this area
 - o Search conducted to identify all Indian studies published in the last 5 years reporting microbiological information on the aetiology of infectious diarrhoea. Studies had to recruit from the general population, and test for multiple pathogens, to reduce risk of bias
 - o 10 studies were identified from 9 states of India
 - o 4 studies included adults, 6 studies were limited to children only
 - o The yield of pathogen detection in included studies ranged from 16.3 (examining parasites only) to 65.2%
 - o When studies investigating parasites only excluded, yield of microbiological testing ranged from 25.6% to 65.2%
 - o Common pathogens included viruses (rotavirus, norovirus) and bacteria (E coli, shigella, cholera)

Other challenges

- Patients in many parts of India do not need to see a doctor to obtain antibiotics for diarrhoea □ lack of stewardship
- Patients may not present to CSA partner sites with mild-moderate diarrhoea (can present directly to pharmacy for antibiotics)

Key questions to answer

- How to test/when to test
- How to treat/when to treat



Methods

- UpToDate
- American College of Gastroenterology Clinical Guidelines (2016)
- Infectious Diseases Society of America Guidelines (2017)
- Indian Council of Medical Research (2019)
- WHO (2005)
- MSF (2021)

Proposed Pathway

- Stable or unstable
 - o If unstable, resuscitate
- Establish time course/chronicity
- Consider differential diagnoses
 - o Sepsis
 - o Acute abdomen
 - o Malaria
 - o Chronic diarrhoea/inflammatory causes
 - o Treat and investigate primary diagnosis as per appropriate pathway

Severity Assessment and Rehydration

- Volume depletion is a major cause of morbidity and mortality from diarrhoea
- For all adult diarrhoea:
 - o Assess degree of dehydration (Appendix)
 - Mild/moderate/severe
 - o If no signs/mild signs of hypovolaemia/dehydration, give ORS after each stool
 - o If signs of moderate hypovolaemia/dehydration, give 2.2 – 4 litres of ORS over 4 hours
 - o If severe hypovolaemia/dehydration, will require IV fluid replacement
 - 30ml/kg over 30 minutes
 - Repeat bolus if severe dehydration persists/pulses remain weak
 - Then 70ml/kg over 2.5 hours
 - Diarrhoea with severe hypovolaemia will require inpatient management until patient can tolerate oral replacement
 - ORS should be given until IV access is possible
 - o In cases of severe diarrhoea, assess ability to manage at CSA partner site – may require transfer
 - o In all, aim to replace ongoing losses as maintenance

Anti-microbial treatment of diarrhoea

- Most acute diarrhoea has an uncomplicated disease course and is self-resolving
- The decision to investigate (i.e. stool microbiology) and treat acute diarrhoea in difficult even in resource-rich settings
 - o Microbiology is time consuming, can have variable yield, and not all pathogens identified on microbiological testing require treatment



- Indications for microbiological testing +/- antibiotic therapy
 - o Signs of sepsis (see also: sepsis pathway TBD)
 - o Grossly bloody stool
 - o Stool with pus or mucus
 - o Severe dehydration
 - o Extended disease course (how many days – ICMR suggest 3 days)
- In most other cases, microbiological testing and antibiotic therapy is NOT required

Suggested Treatment Regimens for Acute Diarrhoea

- If required, treatment should be targeted towards suspected causative organism (see table)
- If cholera suspected:
 - o 300mg Doxycycline PO once **OR**
 - o Azithromycin 1g once
- If Shigella suspected/bloody diarrhoea
 - o Ciprofloxacin 500mg BD for 3 days **OR**
 - o Azithromycin 500mg daily for 3 days

Follow up activities

- If tolerating oral intake, discharge home with oral rehydration and instructions
 - o Water to be boiled
 - o Hand hygiene
- Isolation of patient from other household contacts if possible
- Return to CSA partner site if
 - o Worsening symptoms
 - o Unable to tolerate oral fluid intake
 - o Development of gross blood/mucus/pus in stool