

Rotavirus

Epidemiology

Source: Human
Anatomical source
Stools, resp. excretions

Transmission

- Contact: Person-to-person (Fecal-oral)
- Indirect: fomites
- Possibly through respiratory droplets
- 20% of adult household contacts of infected infants develop symptomatic infection.

Incubation
1-3 days
(1-14 days)

Asymptomatic Carriers

- Clinical case definition**
- Non-bloody diarrhea
 - Vomiting
 - Fever

Time: 3-8 days

Transmissibility: up to 21 days after onset of symptoms

Complication

- Dehydration
- Electrolyte abnormalities
- Acidosis

Epi profile:

- Rotavirus gastroenteritis is the most common cause of severe diarrhea in children <5 years old
- Outbreaks in childcare centers, nursing homes,
- Contaminated food/water sources

Diagnosis

Microbiology: Rotaviruses are segmented, double-stranded RNA viruses. There are 7 antigenic groups in the family *Reoviridae*, with Group A viruses being the most common cause of rotavirus diarrhea.

Lab Diagnosis

- **Antigen Detection:** Enzyme immunoassay or latex agglutination assay for group A antigen detection in stool.
 - High specificity but false-positives and non-specific reactions can occur
 - Perform confirmatory assays to differentiate non-specific reactions from true positives
- Electron microscopy, reverse transcriptase-polymerase chain reaction (RT-PCR), nucleic acid hybridization, & culture tests are available but are primarily used in research settings

Probable: Clinically compatible case that is epidemiologically linked to a confirmed case
Confirmed: Clinically compatible case that is laboratory confirmed

Treatment, Prophylaxis

Treatment

- No antiviral therapy available
- Oral or parenteral fluids & electrolytes can be given to correct dehydration
- Supportive treatment

Contact Precautions

Control

Not reportable

Immunization

- As of 2006, a rotavirus vaccine is available for use in infants in the U.S.
- 3 doses administered orally at 2, 4, and 6 months of age

Control Measures in Childcare Centers

- Wash all surfaces with soap and water
- Disinfectants or 70% ethanol solution may be used to prevent disease transmission