### CLINICAL PRESENTATION

#### AMOEBIASIS

A disease occur due to infection by an anaerobic parasitic protozoan

*Entamoeba histolytica*

- infect about 50 million people worldwide.
- active trophozoite stage (only in host & fresh loose feces)
- cysts survive outside the host in water, in soils, & on foods, especially under moist conditions for months.

**Amoebic liver abscess**

- fatal if untreated & liver most common
- the amoeba can actually 'bore' into the intestinal wall, causing ulcers
  - intestinal symptoms then reach the blood stream
  - vital organs of the human body, liver, lungs, brain, spleen.

- asymptomatic
  - bloody diarrhea w mucous
  - tenesmus as infections are associated with mucosal ulceration (amoebic dysentery).
  - weight loss
  - fatigue
  - abdominal pain
  - fulminating dysentery

#### GIARDIASIS

**Giardia infection**

- occur through ingestion of dormant microbial cysts of flagellated protozoan parasite called *Giardia lamblia* in contaminated water, food, or by the faecal-oral route.
- It colonizes and reproduces in the small intestine.
- The parasite attaches to the epithelium by a ventral adhesive disc.

- Colonization → inflammation and villous atrophy → reduce the gut's absorptive capability → diarrhea.

- symptomatic only in about 50% .
  - Diarrhea & malaise
  - excessive gas
  - steatorrhoea (pale, foul smelling, greasy stools)
  - epigastric pain
  - bloating
  - nausea
  - loss of appetite
  - weight loss.
  - Pus, mucus & blood in stool.

In healthy individuals

- self-limiting condition
- infection prolonged in immunocompromised ptn/ who have ↓ gastric acid secretion.

#### CRYPTOSPORIDIUM

*Cryptosporidium* is a genus of protozoans that can cause GIT illness with diarrhea.

In humans, it remains in the lower intestine and may remain for up to five weeks and result in an infection of intestinal epithelial tissue

**Cryptosporidiosis**

- Acute
- short-term infection
- can become severe
- nonresolving in children & immunocompromised individuals

Most commonly isolated in HIV-positive patients presenting with diarrhea.
### RotaVirus

- Most common cause of severe diarrhoea among infants & young children
  1. Transmitted by the faecal-oral route
  2. Incubation period: 2 days
- It infects and damages the cells that line the small intestine & causes gastroenteritis disease
- Vomiting
- Watery diarrhoea
- Low-grade fever

### Cholera

- Rice water in nature & fishy odor.
- AKA blue death due to a patient's skin turning a bluish-gray from extreme loss of fluids.
- An untreated person with cholera produces 10-20 L of diarrhea a day with fatal results.
- For every symptomatic person, 3 to 100 people get the infection but remain asymptomatic.

#### Primary Symptoms
- Profuse painless diarrhea
- Vomiting of clear fluid

#### Secondary Symptoms
- Low blood pressure
- Poor skin turgor (wrinkled hands)
- Sunken eyes
- Rapid pulse

### Shigellosis

**bacillary dysentery & Marlow Syndrome**

- Shigellosis is a foodborne illness caused by infection by bacteria of the genus *Shigella*.
- The causative organism is frequently found in water polluted with human feces.
- Transmitted via the fecal-oral route.
- The usual mode of transmission is directly person-to-person hand-to-mouth, in the setting of poor hygiene.
- Less than 100 bacterial cells can be enough to cause an infection.

#### Symptoms
- Nausea & vomiting
- Abdominal cramps
- Bloody diarrhea with mucus
- Headache, fatigue, and rose spots

These symptoms can be severe, especially in young children and the elderly.

### Salmonella

**Enteritis salmonellosis or food poisoning Salmonella**

- An infection with *Salmonella* bacteria.
- Illness lasts 4-7 days.
- Most people recover without treatment.
- Diarrhea may be so severe, the patient becomes dangerously dehydrated and must be hospitalized.
- The type of *Salmonella* usually associated with infections in humans, nontyphoidal *Salmonella*, is usually contracted from sources such as: Poultry, pork, and beef, if the meat is prepared incorrectly or is infected with the bacteria after preparation.

#### Symptoms
- Nausea & vomiting
- Abdominal cramps
- Bloody diarrhea with mucus
- Headache, fatigue, and rose spots

These symptoms can be severe, especially in young children and the elderly.

Symptoms last generally up to a week, and can appear 12 to 72 hours after bacterial ingestion.
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<th>CLOSTRIDIUM DIFFICILE</th>
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| is a **species** of **Gram-positive bacteria** of the genus **Clostridium**.  
**C. difficile** is a **commensal bacterium** of the human **intestine** in 2–5% of the population.  
It causes severe **diarrhea** and other intestinal disease when competing bacteria in the **gut flora** have been wiped out by antibiotics **clindamycin** (and chemotherapeutic antineoplastic drugs).  
bacteria release toxins that can cause **bloating** and **diarrhea**, with abdominal pain, which may become severe.  
It is the most common cause of pseudomembranous colitis, and in rare cases this can progress to **toxic megacolon**, which can be life-threatening. |

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<th>ESCHERICHIA COLI</th>
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| Pathogenic **Most E. coli strains** are harmless, but some **serotypes** are **pathogenic** and can cause serious **food poisoning** in **humans**.  
Transmission of pathogenic **E. coli** often occurs via **faecal–oral transmission**.  
Common routes of transmission include: unhygienic food preparation, farm contamination due to manure fertilization, irrigation of crops with contaminated **grey water** or raw **sewage**, or direct consumption of sewage-contaminated water  
It induces its effect through production of enterotoxin or diffuse mucosal adherence |

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<th>STAPHYLOCOCCUS AUREUS</th>
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| Staphylococcus food poisoning is caused by ingestion of performed staphylococcus toxins.  
It is the third most common cause of food borne illnesses  
Symptoms occur after 1-6 hours of contaminated food (cream-filled cake, salad, ham) with heat stable toxins  
- Nausea & vomiting  
- abdominal pain followed by diarrhea  
- fever is rare |

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<th>TRAVELER'S DIARRHEA</th>
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| the most common illness affecting travelers.  
**TD** is defined as three or more unformed **stools** in 24 hours passed by a traveler, commonly accompanied by abdominal cramps, nausea, and bloating.  
**Enterotoxigenic Escherichia coli** is the most commonly isolated pathogen.  
Most cases are self-limited. |