

# **Bacterial Dysentery**

## **Definition:**

Acute infectious disease of intestine Caused by dysentery bacilli (genus shigella)

**Place of lesion:** sigmoid & rectum

**Pathological Feature:**

Diffuse fibrinous

Exudative inflammation

## **Clinical manifestation:**

Fever, abdominal pain, diarrhea, tenesmus, stool mixed with mucus blood & pus. Even accompanied with shock and toxic-encephalopathy.

## **Etiology:**

**Causative organism:**

*Dysentery bacilli*

Genus: Shigella

Gram-stained negative Non-motile short rod

**S. dysenteriae:**

Most severe

**S. flexneri:**

The epidemic group and easily turn to chronic

**S. boydii:**

Tropical and subon

**S. sonnei:**

Mostly mild

## **Source of infection:**

Patients and carriers

## **Route of transmission:**

Fecal-oral route

Submitted to: Dr. Fayyaz

Submitted by: Maria Qadeer

**Season:**

Summer & Fall

**Pathogenesis:**

It possess two potential pathogenetic modes of action:

**1. Invasiveness:**

Attachment

Penetration

Multiplication

**2. Enterotoxin**

Contaminate food by infected feces.

Bacteria Shigella enter to the gut.

Growth in the small intestine.

Spread to the colon, inflame the epithelium mucosa cell and produce or secrete toxin.

Break through the colon wall & necrosis the epithelium cell causes hemorrhage, more mucus, purulent at the epithelium surface.

At the end, ulcer colon occurs.

**Incubation period:**

1-2 day, (hours to 7 days)

**Type of Dysentery:**

Common type

Mild type

Toxic type

**Clinical manifestation: (according to types)****Common type: (typical type)**

Acute onset Shiver high fever

Abdominal pain(tenderness)

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Diarrhea: stool mixed with mucus, blood & pus tenesmus

1 week

**Mild type:** (atypical type)

Caused by *S. sonnei* Low fever or no fever abdominal pain is mild

stool mixed with mucus,

Without blood & pus

Diagnosis by isolation of bacteria 3~7d

**Toxic Type:**

Age: 2 to 7 yrs.

Abrupt onset, high fever, T 40°C Dysphoria, lethargy, convulsion repeatedly, coma.

Circulatory & respiratory collapse

Diarrhea mild or absent at beginning

### **Laboratory Findings:**

**Blood picture:**

WBC count increase, ( $10\sim20\times10^9/L$ )

neutrophils increase

**Stool examination:**

Gross examination: stool mixed with

mucus, blood & pus.

**Direct microscopic examination:**

WBC, RBC, pus cells Bacteria culture

PCR:DNA

**Sigmoidoscopy:**

Chronic patients

Shallow ulcer Scar

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## **Treatment:**

Fluid and electrolyte replacement

Floroquniolones are highly effective in case of shigellosis.

Dose of ciprofloxacin is 500mg b.i.d orally in adults (7.5 mg/kg twice daily in children).

Amoxicillin is an alternative first-line drug for *S. sonnei*. The dose of amoxicillin is 250–500 mg three times daily in adults, and 62.5–125 mg three times daily in children. Azithromycin (doses as for campylobacteriosis) is increasingly recommended as an alternative agent for shigellosis, especially in children.

Third-generation cephalosporins such as ceftriaxone are another option for severe shigellosis. Trimethoprim resistance is now common, so this agent can no longer be recommended as empiric therapy.

Antibiotic therapy is usually given for a maximum of 5 days.

## **Prevention and control**

Detection of carriers and treatment of the sick will interrupt an epidemic.

Hand washing after toilet and before handling or eating Food .

3 Adequate and safe water supply.

4 Control of flies

5 Cleanliness in food handling and preparation