

## Typhoid fever

- Typhoid fever, also known as Enteric fever, is a bacterial infection which is caused by *salmonella typhi* and *salmonella paratyphi* A, B and C.

It can spread from person to person usually through contaminated water or food. A poor personal hygiene can also cause typhoid.

### CLINICAL FEATURES :

- Incubation period ranges from 8-15 days to 5-60 days.

- Headache
- Malaise.
- Anorexia
- A coated tongue
- Abdominal discomfort.

→ Seen on onset of infection

- Pyrexia
- Severe headache
- Palpable spleen
- Rose spots on skin

2nd - 3rd week of infection

- How does it happen? Pathophysiology?

• In the gut, the bacilli get attached to the epithelial cells of the intestinal villi and penetrate to the lamina propria and sub-mucosa.



- They are phagocytosed there by neutrophils and macrophages. They resist intracellular killing and multiply within these cells.
- They enter the mesenteric lymph nodes, multiply there and reach the blood stream via thoracic duct. The bacilli are seeded in the liver, gall bladder, spleen, bone marrow, lymph nodes, lungs and kidneys.
- The cells multiply in all organs and cause bacteraemia as an onset of clinical disease.

#### \* Important complications:

- Intestinal perforation
- Hemorrhage
- Circulatory collapse.

#### DIAGNOSIS :

- (1) Isolation and Identification of the causative agent from a specimen of the patient's blood, urine, faeces, bone marrow, nose swabs.
- (2) Demonstration of antibodies or typhoid bacillus antigen in blood or urine.
- (3) WIDAL test.
- (4) Indirect hemagglutination
- (5) Counter Immunoelectrophoresis
- (6) ELISA or solid-phase radio-immunoassay.



## TREATMENT:

- Proper sewage disposal, good personal hygiene and clean water supply.
- Firstly, the drugs given were:
  - Ampicillin
  - Amoxicillin
  - Co-trimoxazole
  - Trimethoprim
  - chloramphenicol.

But, the bacteria started to develop resistance against these drugs.

Now, the drugs given are:

- Fluoroquinolones
  - ciprofloxacin
  - Pefloxacin
  - Ofloxacin
- 3rd generation cephalosporins
  - ceftazidime
  - ceftioxone
  - cefotaxime.