**Difference Between Typhus and Typhoid**

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**Key Difference - Typhus vs Typhoid**

Typhus and typhoid are two infectious diseases caused by bacteria that enter into the human body via contaminated food and arthropods respectively. Typhus is a collective name given to a group of diseases caused by the rickettsia species, and enteric fever (typhoid fever) is an acute systemic illness characterized by fever, headache, and abdominal pain. The key difference between these illnesses is that *typhus* is caused by rickettsiae whereas *typhoid* is caused by *Salmonella typhi* and *paratyphi*.

**What is Typhus?**

Typhus is a collective name given to a group of diseases caused by the rickettsia species. These are small bacteria that are transmitted to the humans via arthropods such as body lice. Rickettsiae live in the alimentary tract of the arthropods and enter into the human body by the inoculation of arthropod feces during scratching. There is multisystem involvement with predominant vasculitis.

**Clinical Features**

There are main two groups of typhus as typhus fever group and spotted fever group.

Hard tick is the vector of spotted fevers on most of the occasions. An eschar develops at the site of bite following an incubation period of 4-10 days. There are high fever and myalgia with a maculopapular rash which later progresses into a petechial rash.

Typhus fever group is subdivided into three smaller subcategories as epidemic typhus, endemic typhus and scrub typhus that are transmitted by body louse, rodents and chiggers respectively. There is an incubation period of 1-3 weeks after which there is a rapid and sudden onset of a febrile illness with associated myalgia and malaise. The patient usually has a severe headache with conjunctivitis. A measles-like rash appears on the fifth day with the symptoms of meningoencephalitis may progress into a coma, Myocarditis, peripheral gangrene, pneumonia, and splenomegaly occur in the most severe stage of the disease. Oliguric renal failure can develop in the fulminant disease.

**Diagnosis**

Diagnosis is based on the clinical features. PCR can be used for the confirmation of diagnosis.
Figure 01: Malar Rash in Epidemic Typhus

Treatment

Doxycycline or tetracycline can be given for 5-7 days. Ciprofloxacin is also effective.

What is Typhoid?

Enteric fever is an acute systemic illness that is characterized by fever, headache, and abdominal pain. Typhoid and paratyphoid are two variants of enteric fever caused by *Salmonella typhi* and *paratyphi* respectively. The infectious agent is transmitted as a result of the consumption of contaminated water and food.

Clinical Features

Clinical features appear after an incubation period of 10-14 days.
- Intermittent fever
- Headache
- Abdominal pain
- Hepatosplenomegaly
- Lymphadenopathy
- Maculopapular rash
- If not treated, the patient can get complications such as intestinal perforations, lobar pneumonia, meningitis etc.

**Diagnosis**

Definitive diagnosis can be done through the culture of organisms from blood samples obtained from the patient. Leucopenia is common but nonspecific.

![Death Rate for Typhoid Fever United States, 1900-1960](source: U.S. Centers for Disease Control and Prevention, Summary of Notifiable Diseases, 1997.

**Figure 02: Death Rate for Typhoid Fever in the United States during 1900-1960**

**Management**

Nowadays quinolones are the drug of choice in the management of enteric fever. Earlier cotrimoxazole and amoxicillin were also used, but their importance has gone down due to the emerging resistance against them.

**What is the Similarity Between Typhus and Typhoid?**
Both diseases are infectious diseases caused by different groups of bacteria.

**What is the Difference Between Typhus and Typhoid?**

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**Transmission**

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- *Intermittent fever*
- *Headache*
- *Abdominal pain*
- *Hepatosplenomegaly*
in the fulminant disease.

- Lymphadenopathy
- Maculopapular rash

If not treated, the patient can get complications such as intestinal perforations, lobar pneumonia, meningitis and etc.

### Treatment

| Doxycycline or tetracycline can be given for 5-7 days. Ciprofloxacin is also effective. | Nowadays quinolones are the drug of choice in the management of enteric fever. Earlier cotrimoxazole and amoxicillin were also used, but their importance has gone down due to the emerging resistance against them. |

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**Summary - Typhus vs Typhoid**

Typhus is a collective name given to a group of diseases caused by the rickettsia species. On the other hand, enteric fever is an acute systemic illness characterized by fever, headache, and abdominal pain. Typhus is caused by rickettsiae whereas typhoid is caused by *Salmonella typhi* and *paratyphi*. This is the difference between typhus and typhoid.

**Reference:**


**Image Courtesy:**

1. 'Epidemic Typhus. Macular rash' By Geor Jochmann, [CC BY-SA 4.0] via Commons Wikimedia
2. 'Chlorination Graphic - Typhoid Fever' By U.S. Centers for Disease Control and Prevention - U.S. Centers for Disease Control and Prevention, Summary of Notable Diseases, 1997., (Public Domain) via Commons Wikimedia

**How to Cite this Article?**

