Paratyphoid Fever

Reporting Obligations

Paratyphoid Fever is designated as a disease of public health significance and is reportable under the *Ontario Health Protection and Promotion Act*. Report all suspect and confirmed cases **within one business day** to the health unit.

REPORTING FORM

Epidemiology

Aetiologic Agent:

Paratyphoid fever is caused by *Salmonella enterica* subspecies *enterica* serotype Paratyphi A, B and C (commonly *S. Paratyphi*).

Note that *Salmonella* Paratyphi B variant Java should be reported as a case of salmonellosis, not paratyphoid fever.

Clinical Presentation:

Paratyphoid fever is a systemic bacterial disease which usually presents with fever, headache, malaise, anorexia, and diminished frequency of stool, which is more common than diarrhea, plus bradycardia, enlargement of spleen and rose spots on trunk in 25% of white-skinned patients. The clinical picture varies from mild illness with low-grade fever to severe clinical disease with abdominal discomfort and multiple complications. Peyer patches in the ileum can ulcerate with intestinal hemorrhage or perforation, especially late in untreated cases.

Modes of transmission:

Fecal-oral route. Transmitted via ingestion of food and water contaminated by feces and urine of cases and carriers; also, by ingestion of contaminated milk, raw fruit and vegetables and shellfish harvested from contaminated water. Flies may be vectors. Person-to-person transmission has also been documented.

Incubation Period:

1-10 days.

Period of Communicability:

Communicable as long as organisms are excreted; from the appearance of prodromal symptoms, throughout illness and for periods of up to two weeks after onset.

Risk Factors/Susceptibility

Susceptibility is general and is increased in individuals with gastric achlorhydria and possibly in those who are HIV positive. Relative specific immunity follows recovery from clinical disease and inapparent infection.

Travelers should be referred to travel clinics to assess their personal risk and appropriate preventive measures.

Diagnosis & Laboratory Testing

Laboratory confirmation of infection with or without clinically compatible signs and symptoms (characterized by insidious onset of sustained fever, headache, malaise, anorexia, relative bradycardia, constipation, or diarrhea):

- Isolation of *Salmonella* Paratyphi A, B, or C (excluding S. Paratyphi B variant Java) from an appropriate clinical specimen (e.g., sterile site, blood, stool, urine).

TESTING INFORMATION & REQUISITION

Treatment & Case Management

Treatment with antibiotics and follow up is under the direction of the attending health care provider. Where possible, physicians should be encouraged to request antibiotic sensitivity testing due to resistant strains. With appropriate antibiotic treatment, infected individuals with typhoid or paratyphoid fever usually recover within ten to 14 days. Educate the case about transmission of infection and proper hand hygiene.

Exclude all cases (regardless of symptoms) of *S*. Paratyphi from food handling, healthcare, and daycare activities until provision of 3 consecutive negative stool samples collected at least 48 hours apart AND at least 48 hours after completion of antibiotic treatment (for ciprofloxacin) OR at least 2 weeks after completion of antibiotic treatment (for ceftriaxone and azithromycin). Close contacts should be seen by their health care provider and screened for illness (stool specimens sent for testing).

If after 6 samples, a case continues to test positive, then he or she may be in an excreter state.

Public Health will follow up as needed.

Patient Information

PATIENT FACT SHEET

References

1. Ministry of Health, Infectious Diseases Protocol - Ontario Public Health Standards, 2022.
2. Public Health Ontario, "Paratyphoid Fever", December 2022.

Additional Resources

1. Centers for Disease Control and Prevention. "Typhoid and Paratyphoid Fever."
2. PHAC. "Canadian Immunization Guide. Paratyphoid Fever"