NATIONAL INSTITUTE FOR COMMUNICABLE DISEASES
Division of the National Health Laboratory Service

TYPHOID PREPAREDNESS

An update for Physicians, Accident & Emergency practitioners and Laboratorians

6th January 2017

Outbreak Response Unit, Division of Public Health Surveillance and Response
National Institute for Communicable Diseases (NICD)
24-hour hotline number: 082-883-9920

Typhoid is endemic in sub-Saharan Africa, and a recent increase in cases has been reported in Zimbabwe. We request that health care professionals be on the lookout for typhoid in South Africa, especially amongst persons returning from areas where typhoid is endemic, or recent outbreaks have been reported (e.g. Harare, Zimbabwe). Guidelines are available on the NICD web site www.nicd.ac.za

Transmission of typhoid

Typhoid is transmitted by faeco-oral contact. The incubation period is usually 10-14 days (range 5-21 days). The infective dose is 100,000 organisms/ml

Typhoid case definitions:

A typhoid *'case under investigation'*:

A person presenting with a documented fever >/= 38.5°C, and any of:

- A travel history within the last month to an area with a confirmed outbreak of typhoid;
- Clinical symptoms of typhoid, including gastrointestinal symptoms (abdominal pain, nausea and vomiting or constipation), relative bradycardia, 'rose spots' (erythematous macula-papular lesions), splenomegaly and/or hepatomegaly, leucopaenia

A confirmed case of typhoid:

The isolation of *Salmonella* Typhi from a clinical specimen in the presence of symptoms compatible with typhoid.

CONSIDER MALARIA IN ALL RETURNING TRAVELLERS WHO PRESENT WITH FEVER. At least two negative malaria tests are required

Public health response to a case of typhoid:

1. Notify the Local Authority, and Department of health using form GW/17 and telephonically
2. Confirm the diagnosis by verifying laboratory results, and patient details.
3. Review the case management and treatment
4. Interview the patient and complete a case investigation form to ascertain risk factors for exposure and likely source of infection
5. Follow up the patient after treatment with three stool specimens to confirm that s/he is not a carrier.
6. Identify contacts at risk, and submit 2x stool specimens for culture to determine carriage status.

Notification of cases and additional support:

1. For public health support and notification of cases, notify the staff member in charge of Infection Control at your facility, who will in turn notify the District and Provincial Communicable Diseases Control Officer.
2. For diagnostic support, contact your microbiology laboratory, and speak to the consultant on call.

Diagnosis of typhoid

1. Blood culture for *S.* Typhi is the specimen of choice. Submit blood cultures as soon as possible, ideally prior to antibiotic administration. Blood cultures may be positive in up to 50-80% of cases
2. Organisms are shed in the stool only after the first week of illness.
3. Bone marrow aspirate is positive in 90% of cases but is an invasive procedure.

Serological testing is not recommended for the diagnosis of acute typhoid.

Treatment of a case of typhoid:

If typhoid is clinically suspected, commence treatment immediately. Do not wait for laboratory results.

Ciprofloxacin is the drug of choice for the treatment of uncomplicated typhoid fever in South Africa.

- Paediatric dose is 15mg/kg/day po bd x 7 days.
- Adults dose 500-750mg po bd x 7 days

Intravenous ceftriaxone may be used in severe cases

- Paediatric does is 50-75 mg/kg/day IV in two divided doses (i.e. 12 hourly) x 10-14 days
- Adult dose: 1-2g ivi 12hourly x 10-14 days

Refer to guidelines for treatment of complicated typhoid, and for eradication of carriage. NICD guidelines are available at www.nicd.ac.za

Infection control

Observe standard precautions including meticulous attention to hand-washing