

Prevalence of *Salmonella typhi* among Pregnant Women in Niger State

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ABSTRACT

Background: Typhoid fever is a global infection and it constitutes serious sources of morbidities and mortalities in Nigeria. Special concern arises as soon as pregnancy is complicated by *S. typhi*. Diverse severe outcomes and morbidity connected with typhoid fever in pregnancy include maternal mortality, premature labor, spontaneous abortion and infection of the fetus. This study aims to determine the seroprevalence of *Salmonella typhi* among pregnant women in Niger State. The objectives of the study were to determine the agglutinin titre levels among the women, to determine the effect of gestation period, age and water supply in relation to the incidence of the infection.

Methods: This study was carried out among pregnant women receiving antenatal care in nine General Hospitals, in Niger State between July 2013 to March 2014 and a cross-sectional study design was utilized. Questionnaires were issued to obtain demographic information. Two milliliters of blood sample was collected from each pregnant woman and centrifuged at 1,500 rpm for 5 minutes. Widal test was used to detect the antibody titers in sera. A titre of 1:80 and above was considered significant.

Results: Nine hundred pregnant women were examined from the three zones of the state, out of which 610 (67.8%) were infected. Prevalence of *Salmonella typhi* in relation to age group shows that women between the ages of 35–44 had the highest rate of infection (71.8%). Those within the age group of 25-34, 15-24 also had a prevalence of 68.1% and 66.7% respectively. The relationship between typhoid fever infection and age group was statistically significant ($P = < 0.05$). Prevalence of *Salmonella typhi* in relation to gestation period shows that pregnant women in their third trimester had the highest infection rate (71.5%) while those in their first and second trimester had a prevalence of 66.1%, 65.5% respectively. The relationship between typhoid fever infection and gestation period was statistically insignificant ($P = > 0.05$). The highest percentage (69.9 %) of significant titre of antibodies to *Salmonella* was detected among subjects who utilize borehole water while the least was detected among subjects who utilize tap water. There was a significance relationship between *Salmonella typhi* infection and water supply ($P < 0.05$).

Conclusion: The prevalence of *Salmonella typhi* among pregnant women in this study is quite high and alarming and can adversely influence maternal-fetal outcome if left untreated.