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**Seroprevalence of typhoid fever from acute febrile patients diagnosed in ICL**

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**Background:** Typhoid fever, caused by Salmonella Typhi and characterized by high fever, is endemically occurring in developing countries including Ethiopia from thousand of years back due to high environmental and behavioural risks. The global burden report on typhoid fever minimum estimates ranges from 16 million cases and 200 000 deaths/year. Over past decades varying trend observed in developing countries, which reported of having an estimated average incidence of 540 per 100,000 populations. In Ethiopia, the definite diagnosis of Typhoid fever by isolating the organisms is not normally used because absence of facilities. However, the sensitive rapid slide agglutination tests, mostly without antibody strength determination using tube dilution method, routinely performed.

**Methods & Materials:** A retrospective data analysis. Laboratory data from Jan 1, 2007-Dec 31, 2011 years, was conducted in the International Clinical Laboratories. The data was collected from Dec 29, 2011-Feb 02, 2012 by using data collection sheet. The electronic data were analyzed and interpreted into a meaningful information with Epidata version 3.1 for data entry and STATA version 11 for data analysis. The ethical clearance was obtained from Akilu Lemma Institute of Pathobiology Department of Tropical and Infectious Diseases Institutional Review Board and additional from the International Clinical Laboratory.

**Results:** A total of 5,029 patients with suspicion of typhoid fever were serologically diagnosed. Of those, smaller numbers (43%) were females with 25.95% positive and greater numbers (57%) were male with 18.84% positive. The age of patients distributed from < 1 year to 87 years and mean age was 33.39 ± 14.72 years [95% Conf. Interval]. Approximately 22% of patients had significant titer equal to 1 in 20 or more for H and/or O agglutinins. Of widal tests, 10% had significantly reactive antibody against H and O antigens whereas 6.7% and 5% were significantly reactive for only H and O antigens, respectively. The significant titer level indicative of typhoid diagnosis was equal to 1 in 160 or more in both H and O agglutinins.

**Conclusion:** In conclusion, Widal slide test lack specificity that possibly overestimate the result. Therefore, there must always be confirmatory tube tests and bacteriological isolation of Salmonella typhi.

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**Urinary tract infections in pregnant women: Uropathogens and antimicrobial resistance profiles**

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**Background:** To study the spectrum of bacterial-organisms responsible for causing urinary tract infection (UTI) in pregnant women and the resistance patterns to first-line antibiotic treatment.

**Methods & Materials:** A total of 2,149 women in different stages of pregnancy attending the department of Obstetrics and Gynecology during January 2011 to August 2013 were tested for asymptomatic and symptomatic UTIs. Quantitative urine culture was performed by inoculation of 10 µl clean-catch mid stream urine specimen on blood and MacConkey agar plates. Asymptomatic bacteriuria was defined as the isolation of the same organism at a colony count ≥ 100,000 colony-forming units (CFUs)/ml in 2 consecutive urine samples of an asymptomatic woman. Symptomatic UTI was defined as the isolation of one organism ≥ 10,000 CFUs/ml of urine in a symptomatic woman. Antibiotic susceptibility testing was performed by disc diffusion technique on Mueller-Hinton agar according to CLSI recommendations and MICs were determined by MicroScan system and Etest. Phenotypic tests were performed by combined and synergy disc method.

**Results:** Out of 2,149 urine cultures, a total of 286 urine samples were found to be positive (13.31%). The most common uropathogen isolated was *E. coli*, followed by *K. pneumoniae*, *E. faecalis*, *P. mirabilis*, CoNS, *P. aeruginosa*, and Group B *Streptococcus* (53.85%, 16.08%, 7.69%, 6.99%, 6.64%, 3.85% and 3.85% respectively). The resistance rate of *E. coli* to Ampicillin, Cephalothin, Cefuroxime, Cefotaxime, Amoxicillin-clavulanate, Nitrofurantoin, was 54.55%, 11.69%, 8.44%, 8.44%, 0.65%, and 1.95% respectively. ESBL production was detected in 15 (7.5%) *E. coli* and *K. pneumoniae* isolates. The resistance rate of CoNS to methicillin and nitrofurantoin was 21.05%, and 5.26% respectively. None of *E. faecalis* isolates was resistant to nitrofurantoin and ampicillin.

**Conclusion:** (a) The prevalence of asymptomatic and symptomatic UTIs among pregnant women is relatively low. (b) The most common uropathogen is *E. coli*. (c) The empiric treatment with ampicillin is not recommended because of the high resistance rate. Nitrofurantoin is an appropriate choice for empirical therapy of lower UTIs (cystitis), caused by the most common Gram-negative and Gram-positive uropathogens. Amoxicillin-clavulanate is an alternative drug of choice for empiric treatment of UTIs caused by both Gram-negative and Gram-positive bacteria.

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