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sub-clinical infections. Regular CMEs, training programmes and lectures should be conducted by societies (e.g., IAMM, HISI) for doctors, nurses and technicians for increasing awareness.

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Prevalence of Toxoplasma gondii Infection amongst Pregnant Women in Assam, India

Dear Editor,

Toxoplasma gondii infection during pregnancy is a causative factor for foetal loss and congenital infection of the newborn.\(^1\) Reports of prevalence of this parasitic infection among pregnant women from northeast India are scanty. Therefore, a seroprevalence study covering 180 pregnant women attending Department of Obstetrics and Gynaecology, Assam Medical College and Hospital (AMCH), Dibrugarh, was conducted during 2003-2004. After written informed consent and approval from the Institutions ethical committee, 180 antenatal cases (17-40 years with a median age of 24.5 years) were enrolled with or without history of pregnancy wastage and screened for IgG and IgM antibody against T. gondii using EIA kits (Pathozyme Toxo IgG and IgM kits).

The seroprevalence of T. gondii infection was 44.6 and 36.8% among the pregnant women with (n=112) and without (n=68) history of pregnancy wastage, respectively, which was statistically insignificant (\(P = 0.37, 95\%\ CI: 0.7-2.5\)). In addition, the IgM seroprevalence was also statistically insignificant (\(P = 0.65, 95\%\ CI: 0.47-5.2\)) with (8.9%) and without (5.9%) pregnancy wastage group, respectively. It was observed that higher prevalence of T. gondii infection was associated with increase in age (\(P = 0.012\)) shown in (Figure), subjects residing in rural areas (\(P = 0.047, 95\%\ CI: 1.01-3.4\)) and low socioeconomic status (\(P = 0.014, 95\%\ CI: 1.2-4.0\)). Increasing numbers of pregnancy wastage also did not had any significant association (\(P = 0.28\)) with T. gondii infection. No significant difference in prevalence was observed among vegetarians and non-vegetarians as also with contact with cats.

The prevalence of this infection from India shows a wide variation and one study has reported as high as 77% in women of reproductive age group.\(^2\) Our study reported similar prevalence rate with one recent study from New Delhi, which found an overall anti-toxoplasma IgG seroprevalence of 45% among pregnant women.\(^3\) Despite the favourable climatic condition of the Northeast, the study did not detect the highest prevalence rate. However, other important factors like consumption of raw or undercooked meat which are regarded as important risk factors,\(^4\) is not rampant in the study region; otherwise we might have observed an even higher prevalence of T. gondii infection in this region. Although, Toxoplasma infection does not cause repeated foetal losses, this is the most common indication for investigation of toxoplasmosis in India.\(^5\) In our study, we also did not find significantly higher prevalence of T. gondii infection with increase in pregnancy losses.

In conclusion, we detected a moderately high prevalence of T. gondii infection among pregnant women...

Dear Editor,

A rise in invasive fungal infections and their emerging resistance have necessitated the need for antifungal susceptibility testing (AFT) for clinical work-up. The standardized broth micro-dilution (BMD) method is expensive, laborious and cumbersome for routine use in clinical microbiology laboratory. Recently, a disc-diffusion method has been approved by CLSI using glucose-methylene-blue (GMB) Mueller-Hinton agar (MHA). Despite being easy and practical, this needs to be confirmed by BMD to exclude false resistance.

Recent reports have documented comparable results between BMD (NCCLS-27-A) and agar-based E-test. The manufacturer-recommended media for E-test is glucose-supplemented RPMI agar (RPMI-G). The end point for azoles is poorly defined on this medium. Therefore, we undertook this study to determine whether GMB-MHA could be used in the E-test method.

A total of 31 blood stream isolates from candidaemia cases were selected. These were speciated using germ tube test, CHROM agar, cornmeal agar and tetrazolium reduction test (Himedia, Mumbai). Antifungal susceptibility of these isolates was performed by E-test and BMD for amphotericin-B and fluconazole. The E-strip (AB-Biodisk, Solna) minimum inhibitory concentration (MIC) was determined on RPMI-G (RPMI + 1.5% agar + 2% glucose) media and GMB-MHA (MHA + 2% glucose + 0.5 μg of methylene blue). For agar diffusion E-test, 0.5 McFarland standard inocula were applied to GMB-MHA and RPMI-G media with a cotton swab. The plates were allowed to dry for at least 15 min before the E-strip was applied to the surface. The MIC for the E-test was measured after 24 h, at transition point where growth abruptly decreased (reduction in colony, size, number and density: approximately 80% growth inhibition standards). BMD-MIC was performed using RPMI and 0.165 M morpholine propanesulfonic acid (Himedia, Mumbai). The interpretation was done spectrophotometrically after 24 and 48 h of incubation, as per NCCLS guidelines. The optical density (OD) of the medium control well was subtracted from the ODs of all other wells and MIC concentration was computed mathematically. Briefly, the BMD-MIC of amphotericin B was determined as the lowest concentration with an OD corresponding to a 50% decrease in turbidity compared to that of growth control and the MICs of fluconazole, corresponding to a 50% decrease in turbidity. The quality control was performed by testing *C. albicans* (ATCC 90028), *C. krusei* (ATCC 6258) and *C. parapsilosis* (ATCC 22019) with each batch of clinical isolates. All the MIC experiments were repeated twice and mean was taken.

The isolates included in the study comprised of *C. tropicalis* (12), *C. parapsilosis* (8), *C. albicans* (8), *C. krusei* (2) and *C. glabrata* (1). Twenty-four (77.4%) of the isolates that were found to be susceptible by BMD were identified as susceptible by RPMI-G agar to amphotericin B and fluconazole. The similar figures for GMB-MHA was 24 (77.4%) and 25 (80.6%) for amphotericin B and fluconazole, respectively. Higher MIC levels (1-2 dilutions) were noted by BMD to exclude false resistance.

References


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