Current problems in serologically based diagnostic algorithm of HIV 1/2: The re-evaluation of immunodot blot assays in HIV 1/2 verification in Turkey

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Background: The use of conventional (serologically based) HIV 1/2 diagnostic algorithm is controversial in recent years. In this study, we aimed to evaluate the serum samples of patients that have been sent to verification tests because of repeat reactive ELISA results and showing HIV1+HIV2 positive band pattern and also to evaluate the position of Western Blot/Line-Immunoblot assay (WB/LIA) verification tests on the national HIV 1/2 diagnostic algorithm.

Methods & Materials: This study was planned as a cross-sectional/retrospective study (January 2014 – September 2015) in serum samples of patients who were referred to the Dermatological Venereal Diseases Hospital, Cerrahpaşa Faculty of Medicine and Turkish Red Crescent North Marmara District Blood Centre. The reactivity of repeat ELISA results has been verified with WB/LIA assays in accordance with the national algorithm. The verified serum samples were confirmed with nucleic acid (NAT) based assays.

Results: In the study, 3224 of 10,591 samples with repeat ELISA reactivity (30.44%) were verified by WB/LIA for HIV infection. In 32(0.99%) of the verified serum samples, along with HIV1 bands HIV2 gp36 bands were also detected positive. Only, 17 of the verified 32 serum samples with gp36 bands were repeated and no gp36 band positivity was detected by Bio-Rad Genius HIV 1/2 Confirmatory Assay in this 17 serum samples. Moreover, the HIV2 RNA of these samples were also detected as negative. Therefore, the HIV1+2 coinfection possibility in these patients has been excluded. All of the serum samples of 32 cases were HIV1 RNA positive. The remaining 15 cases were not attainable because of various reasons.

Conclusion: The detection of false gp36 band in HIV1 infections cause problems in the diagnoses of HIV1/2 patients. These problems in WB/LIA tests may cause delays in the diagnoses of patients and therefore negatively impact their psychological state. In this respect, we suggest that the WB/LIA results have to be evaluated from this aspect and the addition of assays that can produce faster results (peptide-based immunochromatographic methods that distinguish HIV1/2, NAT) to Turkey’s diagnostic algorithm may be suitable in these situations.

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Uptake of intermittent preventive therapy among pregnant women attending antenatal clinics in public and registered private health facilities in Oyo State, Nigeria


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Background: Malaria infection during pregnancy remain a major public health problem in Nigeria. The 2013 Nigeria Demography and Health Survey revealed that while most pregnant women (PW) access Antenatal Care (ANC) from skilled care providers, majority of them do not benefit from interventions to prevent malaria. Intermittent Preventive Therapy (IPTp) using Sulphadoxine-Pyrimethamine (SP) is a full therapeutic course of intermittent medicine given to PW at routine ANC visits. The WHO recommends that this treatment be given to all PW at each scheduled antenatal care visit except during the first trimester. In Nigeria, the national guidelines and strategies for malaria prevention and control during pregnancy has been revised to reflect WHO recommendations.

Methods & Materials: This study utilized secondary data from the routine national District Health Information System which houses the health management information system to assess IPTp uptake among PW who attended ANC in public and private health facilities (HFs) in Oyo State Nigeria from October 2014 to September 2015. The national data system is able to report only two doses. Descriptive statistics was performed to assess IPTp uptake from reporting HFs within the period.

Results: A total of 122,320 pregnant women attended antenatal clinics in 1139 public and private HFs; reporting rate was 93.3% for all health facilities; 99% for public and 84% for private during the period. Overall, 54% (75.1% public, 28.4% private) of first ANC attendees received IPTp1; while only 20% (75.5% public, 24.9% private) received IPTp2. Sixty-four percent attended ANC for a minimum of