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

P. Yüksel 1, R. Caliskan 1, M. Kuskucu 1, S. Islak Mutcalı 2, E. Kosan 3, H. Kirkoyun Uysal 4, Z. Habip 1, A. Abdelkerem 1, B. Mete 5, S. Sarıbas 1, E. Bonabi 6, I. Birinci 3, O. Dinc 1, K. Midilli 1, B. Kocazeybek 1

1 Istanbul University, Cerrahpaşa Medical Faculty, Istanbul, Turkey
2 Dermatological Venereal Diseases Hospital, Istanbul, Turkey
3 Capa, Red Crescent Blood Center, Istanbul, Turkey
4 Istanbul University Istanbul Medical Faculty, Istanbul, Turkey
5 Istanbul University, Cerrahpaşa Medical Faculty, Istanbul, Turkey
6 Istanbul Aydın University, Istanbul, Turkey

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, 3,224 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 RNAs of these samples were also detected as negative. Therefore, the HIV1+2 co-infection 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 impacts 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.

http://dx.doi.org/10.1016/j.ijid.2016.02.604

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


1 Malaria Consortium/Malaria Action Program for States, Ibadan, Oyo, Nigeria
2 Malaria Consortium/Malaria Action Program for States, Ibadan, Nigeria
3 Malaria Consortium/Malaria Action Program for States, Nigeria, Ibadan, Nigeria
4 FHI360/ Malaria Action Program for States, Nigeria, Ibadan, Nigeria
5 Oyo State Malaria Control Programme, Ibadan, Nigeria
6 Malaria Consortium/Malaria Action Program for States, Nigeria, Abuja, Nigeria
7 PMI Malaria Action Program for States, Abuja, Nigeria
8 FHI360/ Malaria Action Program for States, Nigeria, Abuja, Nigeria

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
four times; 53% of all PW who attended ANC were delivered in the HFs (48.8% public and 51.2% private).

**Conclusion:** Although majority of the PW had attended ANC at least four times, uptake of the two doses of IPTp remains low; this was worse in the private HFs. Targeted capacity building for ANC providers and HFs in the private sector may reduce missed opportunities for prevention of malaria among women attending ANC in the state. Further exploration of kind of care received by those who attended ANC but did not deliver in the HF is recommended.

http://dx.doi.org/10.1016/j.ijid.2016.02.605

**Type:** Poster Presentation

**Final Abstract Number:** 42.140
**Session:** Poster Session II
**Date:** Friday, March 4, 2016
**Time:** 12:45-14:15
**Room:** Hall 3 (Posters & Exhibition)

---

**Prospective cohort study on rectal colonization with Carbapenem Resistant Enterobactericeae in patients admitted in a tertiary care hospital**

R. Arjun 1*, P. Patil 2, P. Gupta 2, P. Wagle 1

1 Kerala Institute of Medical Sciences, Trivandrum, India
2 KIMS Hospital, Trivandrum, India

**Background:** The data on prevalence of Carbapenem Resistant Enterobactericeae (CRE) colonisation in south India is lacking. This study was carried out to assess the prevalence of rectal colonisation of CRE, to compare CRE prevalence in patients admitted from the community with those with prior healthcare exposure and association between CRE colonisation and true CRE infection.

**Methods & Materials:** 138 consecutive patients admitted to multi disciplinary ICU from May 2015 were included after appropriate exclusions. Rectal swab was collected within 24 hours of admission by trained nurses. Data was collected in a structured proforma, samples were processed according to CDC guidelines. Patients were followed up till discharge. Based on the published data, sample strength of 114 was calculated for adequately powering the study at 95% CI and 20% desired precision. Fischer’s Exact Test was used for analysing the statistical significance.

**Results:** 138 patients were included in the study and 9 (6.5%) were found to have rectal colonisation with CRE. K. pneumoniae was isolated in 7 cases and E.coli in 2. Mean age was 51.78 years. 63% were males. 63% had comorbidities, diabetes mellitus being most common (n = 72). 61% had previous hospitalisation within last 3 months. Previous antibiotic use, especially carbapenem use, was significantly associated with CRE colonisation (p = 0.004, OR-7.59, LL-0.93, UL-61.63 after correction and p = 0.026, OR-8.71, LL-1.79, UL-42.3 respectively). Out of 138, 20 patients grew CRE from sites other than rectum, of which 6 had true infection, while 14 were colonised. Rectal colonisation with CRE was found significantly associated with isolating CRE from other samples (p = 0.019, OR-5.65, LL-1.37, UL-23.27) though not with true infection (p = 0.662, OR-2.27, LL-0.24, UL-21.02 after correction). A logistic regression was performed to ascertain the effects of variables on the likelihood that participants have CRE colonisation and was statistically significant, $\chi^2 = 27.27$, $p = 0.039$. The model explained 46.9% (Nagelkerke $R^2$) of the variance in CRE colonisation and correctly classified 94.9% of cases.

**Conclusion:** The prevalence of CRE rectal colonisation is low compared to previous studies. Understanding the risk factors like previous hospitalisation, carbapenem use and the risk of multiple site colonisation will help focusing infection control measures in these patients to prevent transmission.

http://dx.doi.org/10.1016/j.ijid.2016.02.606

**Type:** Poster Presentation

---

**Evaluation of antimicrobial and disinfectant resistant bacteria isolated from the environment of a University Health Centre**

O.O. Ayepola 1*, L.O. Egwari, G.I. Olasehinde

Covenant University, Ota, Nigeria

**Background:** The hospital environment continues to be a source of healthcare associated infections despite hospital infection control strategies. In addition there is an increased prevalence of antimicrobial and disinfectant resistant bacteria. This study was carried out to detect the presence of antimicrobial and disinfectant resistant pathogenic bacteria after the disinfection of the floors and surfaces in a University health centre in Nigeria.

**Methods & Materials:** Environmental samples were obtained from different areas within the health centre such as the wards, theatre, treatment room, laboratory and the waiting area. Samples were taken from floors, door handles, patient beds, floors, table tops using moist sterile swabs. Samples were inoculated on appropriate culture media and isolates were identified using standard bacteriological methods. Antimicrobial susceptibility and disinfectant susceptibility tests were carried out using the disk diffusion and agar dilution techniques.

**Results:** The isolated organisms include Staphylococcus aureus, coagulase negative staphylococci, Klebsiella spp, Bacillus spp, Escherichia coli, Proteus spp and Streptococcus spp. Antimicrobial resistance was observed against penicillin, trimethoprim-sulphamethoxazole, tetracycline, gentamicin and cefoxitin. Multidrug resistance was observed in S. aureus. Susceptibility to disinfectants varied with concentrations but there were resistance to certain disinfectants at the recommended dilutions.

**Conclusion:** This study has shown that antibiotic resistant and disinfectant resistant organisms may persist in the environment after disinfection. Continual monitoring of the hospital environment is necessary to prevent infections caused by resistant pathogens.

http://dx.doi.org/10.1016/j.ijid.2016.02.607