Final Abstract Number: 40.007
Session: Virology and Viral Infections (Non-HIV)
Date: Thursday, June 14, 2012
Time: 12:45-14:15
Room: Poster & Exhibition Area

Co-infection of Epstein-Barr virus (EBV) with high risk Human papillomavirus (HR-HPV) is a significant risk of cervical cancer

S. Aromseree[1,*], C. Pientong[1], N. Sunthamala[1], P. Swangphon[1], A. Chaiwongkot[1], B. Kongyingyoes[2], N. Patarapadungkit[3], B. Chumworathayee[4], T. Ekalaksananan[1]

[1] *Department of Microbiology, Faculty of Medicine, Khon Kaen University, Khon Kaen, Thailand*
[2] *Department of Pharmacology, Faculty of Medicine, Khon Kaen University, Khon Kaen, Thailand*
[3] *Department of Pathology, Faculty of Medicine, Khon Kaen University, Khon Kaen, Thailand*
[4] *Department of Obstetrics and Gynecology, Faculty of Medicine, Khon Kaen University, Khon Kaen, Thailand*

Background: Cervical cancer is the 2nd most common cancer among women in developing countries and well known to be caused by HPV infection. However, only small percentage of HPV infected women develop cervical cancer, therefore other cofactors including sexual transmitted infectious agents may influence the disease development. This study aimed to investigate the association of EBV co-infection with HPV in cervical lesion.

Methods: HPV and EBV DNA in cervical tissues were detected by polymerase chain reaction (PCR). HPV genotypes were determined by reverse line blot hybridization assay and HPV physical status was investigated by the amplification of papillomavirus oncogene transcripts (*APOT*) *assay*. Data were analyzed by SPSS 13.0.

Results: The presence of EBV DNA in no squamous intraepithelial lesion (noSIL), low grade SIL (LSIL), high grade SIL (HSIL) and cervical carcinoma (CA) groups were 37.50% (12/32), 14.29% (5/35), 60.00% (27/45) and 38.71% (12/31), respectively while the HPV DNA were detected in 43.75% (14/32), 45.71% (16/35), 82.22% (37/45) and 93.55% (29/31), respectively. All of 143 cases, co-infections of HPV and EBV were detected in 39 cases and more frequently found in HSIL/CA group than in noSIL/LSIL ($p < 0.05$, OR = 5.081). Each genotype of HR-HPV infection in HSIL/CA group (HPV16, 33, 35, 39, 45 and 58) were found to be co-infected with EBV more than 45%. This co-infection pattern was not found in noSIL/LSIL group. For investigation of HPV physical status, the result showed that EBV co-infection in noSIL/LSIL group was associated with HPV infection with only episomal form. Interestingly, in HSIL/CA group, EBV co-infection was found in both episomal and integration form of HPV infection. EBV co-infection with HPV episomal form (35.48%) is significantly higher than HPV-alone infection (11.43%), whereas with integration form, HPV-alone infection (28.57%) is higher but no significant difference when compared to HPV-EBV co-infection (12.90%).

Conclusion: This study demonstrated that EBV-HPV co-infections, especially with HR-HPV were significantly increased in HSIL/CA groups. Interestingly, this co-infection was not associated with HPV integration but raised the possibility that EBV could be a possible cofactor and induce HPV episomal form to contribute to cervical cancer development.

http://dx.doi.org/10.1016/j.ijid.2012.05.169

Final Abstract Number: 40.008
Session: Virology and Viral Infections (Non-HIV)
Date: Thursday, June 14, 2012
Time: 12:45-14:15
Room: Poster & Exhibition Area

Lassa fever practice challenges in Nigeria

D. Asogun[1,*], P. Okokhere[2], E. Tobin[3], S.A. Okogbenin[2], G. Akpede[1], C. Happi[4], S. Gunther[5]

[1] *Irrua Specialist Teaching Hospital, Irrua, Edo, Nigeria*
[2] *Irrua Specialist Teaching Hospital, Irrua, Nigeria, Irrua, Edo, Nigeria*
[3] *Irrua specialist Teaching hospital, Irrua, Edo, Nigeria*
[4] *UCH Ibadan, Ibadan, Nigeria*
[5] *Bernhard-Nocht-Institute for Tropical Medicine, Hamburg, Germany*

Background: Lassa fever (LF), is an acute viral haemorrhagic fever that has assumed epidemic proportions in many parts of Nigeria. During epidemics, the case fatality rate may be up to 50% or more. Unfortunately the diagnosis and clinical management of lassa fever poses great challenge due to the fact that early symptoms of the disease are often indistinguishable from that of malaria which is also endemic in West Africa and the diagnostic challenges posed by the requirement for highly sophisticated diagnostic technique, which is unavailable in over 90% of the health facilities in Nigeria.

Methods: Over a three year period the Lassa Fever practice at the Irrua Specialist Hospital (ISTH), Nigeria was documented. All the clinically suspected cases of LF admitted to ISTH between September 2008 and September 2011 were reviewed. Only patients who satisfied the clinical criteria for the diagnosis of LF, were included in the review. Laboratory diagnosis was by RT-PCR. Challenges experienced in the treatment (drug administration) and clinical management of atypical presentations and complications of the diseases are discussed and the outcome variables presented. SPSS version 12 was used for statistical analysis

Results: Overall case fatality rate (CFR) was 35.8%. CFR increased with increasing delay before presentation. It was 56.3% at 14 or more days before presentation. Challenges with diagnosis include need for a high index of suspicion for clinical diagnosis, as most patients present with symptoms similar to malaria or other common causes of fever. Drug administration with Ribavirin poses significant stress to the physician as it requires the use of several ampoules of the drug, often between 20 -50 ampoule or more depending on the weight of the patient. At ISTH we have partially overcome this dilemma by giving the loading doses of 100mg/kg and 25mg/kg respectively over 5days rather than the conventional textbook recommendation. Presently we have observed only 2 cases of Non response to Ribavarin.

Conclusion: Lassa fever practice challenges in Nigeria include the initial difficulty in making diagnosis because of similarity of lassa fever to other common infectious diseases, and few number of diagnostic facilities

http://dx.doi.org/10.1016/j.ijid.2012.05.170