Type: Poster Presentation

Final Abstract Number: 43.025
Session: Infectious Disease Surveillance I
Date: Thursday, April 3, 2014
Time: 12:45-14:15
Room: Ballroom

Prevalence of HSV1 and HSV2 among HIV and AIDS patients in the Limpopo Province by real time PCR using urine samples

H.P. Mnisi[1,*], A. Samie[2]

[1] *University of Venda, Thohoyandou, South Africa*
[2] *University of Venda, Thohoyandou, Limpopo, South Africa*

Background: Herpes simplex virus (HSV) is a common cause of ulcerative mucocutaneous disease in both immunocompetent and immunocompromised individuals. HSV-1 is usually acquired in childhood and causes oral ulcers, whereas HSV-2 is sexually transmitted and causes anogenital ulcers. The rates of prevalence of HSV-1 and 2 differ widely between and within countries; however the occurrence of HSV1 and 2 among HIV patients in the Northern part of South Africa has not been thoroughly investigated.

Methods & Materials: In order to determine the prevalence and risk factors of HSV1 and 2, urine samples were collected from HIV and AIDS patients attending different treatment centers in the Limpopo Province. Total genomic DNA was isolated from these samples using the Qiagen Blood Mini Kit and a real time PCR protocol was used for the detection of HSV1 and 2 in the urine samples. Demographic data, clinical and socioeconomic status data were collected from the patients using a structured questionnaire.

Results: The overall prevalence of HSV1 was 52.4% while that of HSV2 was 10.8% from a total of 308 samples. The prevalence of HSV1 was higher among females while that of HSV2 did not vary between males and females. The prevalence of both viruses in the urine increased with age although the difference was not significant. Patients on zidovudine had a much lower prevalence while those on stavudine had higher prevalence. Patients who had TB (χ^2 =9.128; p=0.003), seemed to have a much higher susceptibility to HSV1 however, this was not the case with HSV2. CD4 count and viral load did not seem to have any impact of the occurrence of HSV among these patients.

Conclusion: Generally, history of TB and early age of sexual debut appeared to be the important risk factors while the use of certain ARVs was protective again HSV1 infections. The high recovery rate obtained in this study demonstrates the importance of employing real-time PCR techniques in the diagnosis of the HSV using urine samples. It is also suggested that for research settings in which vaginal swab specimens are not available urine-based PCR may be useful for the detection of HSV1 and 2 in HIV patients.

http://dx.doi.org/10.1016/j.ijid.2014.03.732

Type: Poster Presentation

Final Abstract Number: 43.026
Session: Infectious Disease Surveillance I
Date: Thursday, April 3, 2014
Time: 12:45-14:15
Room: Ballroom

Role of *Neisseria meningitidis* W135 in the cerebrospinal meningitis outbreak in Senegal in 2012: Epidemiological and biological characteristics

G. Ndow[1,*], N.M. Manga[2], I.O. Ba[3], D. Ka[2], V. Cisse-Diallo[2], S.A. Diop[2], N.M. Dia-Badiane[2], L. Fortes Deguenovo[2], C.T. Ndour[2], M. Seydi[2]

[1] *Medical Research Council (MRC), The Gambia Unit, Fajara, Gambia*
[2] *Université Cheik Anta Diop, Dakar, Senegal*
[3] *Direction de la prévention Médicale, Dakar, Senegal*

Background: Since the first large-scale epidemic in 2002, *Neisseria meningitidis* serogroup W135 has been responsible for repeated outbreaks of cerebrospinal meningitis in countries of the meningitis belt. Although no epidemics have been noted in Senegal, sporadic cases of meningitis caused by *N. meningitidis* have been confirmed. The objective of this study was to describe the epidemiological and biological characteristics of the meningitis cases reported during the cerebrospinal meningitis outbreak in Senegal in 2012, with an aim to define the role of *N. meningitidis* W135.

Methods & Materials: We conducted a descriptive retrospective study of the 2012 meningitis outbreak in Senegal. Data was collected from the weekly notification sheets of suspected and confirmed meningitis cases reported to the Division of Preventive Medicine of the Ministry of Health. Continuous surveillance is ongoing and all cases from the 14 regions of Senegal are reported to the Ministry of Health. WHO case definitions and epidemiological thresholds were used to confirm cases and monitor the outbreak.

Results: A total of 895 cases were reported in the 76 health districts of Senegal in 2012. Of these, 776 cases (86.8%) were reported between March and July, the period of the outbreak. The peak was noted in April (35.8% of cases), and in S6 (10.3%). The region of Diourbel recorded the majority of cases (32.4%) with its District of Touba reporting the highest number of cases (150 cases). The highest attack rates were recorded in the district of Dioffior (25.2%) and in the Kaolack region (17.7%). Nioro, Kédougou and Foundiougne districts recorded WHO threshold levels for alert, but no districts recorded WHO threshold for an outbreak. The average age was 10.7 years [IQT 5months - 96years], with 67.3% of subjects aged below 10years. Of the 113 cases confirmed by bacteriology, 100 (88.5%) cases were caused by *N. meningitidis* W135. Twenty-eight deaths were recorded, representing a case fatality of 24.8% among confirmed cases.

Conclusion: The emergence of *Neisseria meningitidis* serogroup W135 must be taken into account in current vaccine strategies, considering its circulation in the population and mortality rate among confirmed meningitis cases observed during this outbreak.

http://dx.doi.org/10.1016/j.ijid.2014.03.733