Antiviral compounds from marine natural product

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Our long-term research interest is to study the regulation of lytic cycle for human cytomegalovirus (HCMV). By employing our knowledge in HCMV, we aim to develop potential therapeutic marine natural products as anti-HCMV drugs. HCMV, a member of Herpesviridae, is an ubiquitous pathogens among human population. Global prevalence rates are around 60 to 99% in geological distribution. For most of the health people, the HCMV remains life-long latency. Nevertheless, the HCMV is a leading etiological agent causing fetal congenital defects in central nerve system. Moreover, the reactivation of latent HCMV infection can be detrimental or even fatal for those susceptible groups, the organ transplant recipients, and the immunocompromised patients. In the course of our ongoing research focused toward the purification of bioactive metabolites from the organism, seven anti-HCMV marine natural compounds were isolated by bioactivity-guided fractionation.

Knowledge, Attitude and Practice towards Prevention of Mother-To-Child Transmission of HIV/AIDS and Associated Factors among Pregnant Women in Hossana Town, Southern Ethiopia

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Background: Mother-to-child transmission is by far the largest source of HIV infection in children below the age of 15 year and accounts for 90% of childhood HIV infections. The transmission of HIV from infected mothers to babies could occur during pregnancy, delivery and breastfeeding. For women to take advantage of measures to reduce transmission, they need to know their HIV status.

Objective: To assess the knowledge, attitude and practices towards prevention of mother-to-child transmission of HIV/AIDS and associated factors among pregnant women in Hossana town

Methods: Community based cross-sectional study was conducted at Hossana town from November 2013-December 2014. Of a total of 422 sample women, 417 pregnant women in Hossana town was included in the study and data were collected by using pre tested structured questionnaire. The collected data were cleaned, edited, fed to computer to be analyzed using SPSS window version 16.0. Results were presented by ratios, tables & diagrams. Binary and multiple logistic regression analysis were done to identify factors associated with KAP towards PMTCT.

Result: A total of 417 pregnant women responded to the questionnaire, yielding a response rate of 98.8% 78.2% knew that the risk of MTCT of HIV can be prevented. 69.92% responded that ART should be started as soon as the status known. 64% of the respondents had good knowledge (greater than average score) on PMTCT. Majority, 98.3% of the respondents had good attitude. 90.4% respondents were practiced PMTCT of HIV. Most, 90.4% mothers tested for HIV during current pregnancy and 93.9% shared test result to their husbands/partners. Husband’s attended higher education, family size of 9-11, Place of the most recent child delivery being health facility, ANC visit for current pregnancy, Awared on HIV counselling and testing, Participated during community conversation on HIV/AIDS issues had shown significant association with knowledge of PMTCT of HIV. On the other hand, Knowledge of MTCT of HIV had shown significant association with practice of PMTCT of HIV.

Conclusion: More than three-forth (78.2%) mothers knew about PMTCT of HIV and 44.7% knew ART drugs could reduce risk of MTCT of HIV. Majority, 98.3% had good attitude towards PMTCT of HIV. Most, 90.4% mothers tested for HIV during current pregnancy and 93.9% shared test result to their husbands/partners.