

with any STI was 19.5 years. 102 (51.0%) of the women were using different methods of hormonal contraceptives while 84 (42.0%) had intrauterine contraceptives devices inserted. About 54.5% (109) had various STIs in both groups. The most common STI diagnosed was bacterial vaginosis (26.5%). Other STIs diagnosed were vaginal candidiasis (26.0%), HIV (8.5%), trichomoniasis (7.5%), Chlamydia cervicitis (7.0%), syphilis (3.5%), Genital warts (3.5%) and gonorrhoea (2.5%). Even though bacterial vaginosis and candidiasis were diagnosed more in women with IUCD while Chlamydia cervicitis, syphilis and gonorrhoea occurred more in women using various types of hormonal contraceptives, there was no statistical relationship between the STIs and their sexual behaviours.

Conclusion Women seeking contraception to prevent unintended pregnancy are as much in need of education about prevention of STIs as much as the counselling regarding the most effective contraceptive methods. Younger age, increased numbers of sexual partners and oral mode of sexual intercourse were significantly associated with increased risk of acquiring vaginal tric.

P1-S5.04 HSV-2 PREVALENCE AND INCIDENCE AMONG STABLE HIV-1 DISCORDANT COUPLES IN NAIROBI, KENYA

doi:10.1136/sextrans-2011-050108.182

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Background To describe HSV-2 prevalence, incidence and their correlates among stable HIV-1 discordant heterosexual couples enrolled in an HIV-1 prevention cohort study in Nairobi, Kenya.

Methods Between 2007 and 2009, 469 HIV-1 discordant couples were recruited from VCT centers, and were followed up quarterly for up to 2 years. Clinical staff administered a questionnaire assessing socio-demographics, behaviour, and biological characteristics. HSV-2 status was assessed using Focus Herpe-Select2 HSV IgG ELISA. Correlates of HSV-2 infection at enrolment, and during follow-up were identified by logistic regression and Cox proportional hazards analysis respectively.

Results Of the couples, 189 (40%) were HSV-2 concordant positive, 114 (24%) were HSV-2 discordant, and 85 (18%) were concordant negative. The incidence of HSV-2 infection was 8.7 cases/100 person-years. 19 (17%) individuals in an initially HSV-2 discordant partnership and 11 (13%) in an initially HSV-2 concordant negative partnership acquired HSV-2 during follow-up. Of these 11 individuals, 9(81%) were the HIV-1 positive index case in the HIV-1 discordant relationship. In a multivariate analysis, HSV-2 prevalence at baseline was significantly associated with female gender (OR 4.4; (95% CI 2.9 to 6.7)), having an HSV-2 positive partner (OR 7.6; (95% CI 5.1 to 11.2)), being HIV positive (OR 2.2; (95% CI 1.5 to 3.1)), increasing age (OR 1.08; (95% CI 1.05 to 1.1)), and older age at sexual debut was protective (OR 0.87; (95% CI 0.83 to 0.93)). HSV-2 incidence during follow-up was significantly associated with female gender (HR 3.5; (95% CI 1.6 to 8.0)), having an HSV-2 positive partner (HR 4.9; (95% CI, 2.0 to 9.9)), and history of any other STI (HR 2.6; (95% CI 1.3 to 5.8)).

Conclusions This is the first large study to report the prevalence and incidence of HSV-2 among sexual partners who are in a stable HIV-1 discordant relationship. Female gender, a history of any other STI, and having an HSV-2 positive partner were associated with an increased risk of acquiring HSV-2. 11 individuals a majority of them with HIV acquired HSV-2 during follow-up despite being in HSV-2 concordant negative relationship at enrolment. The high incidence of HSV-2 in couples who were initially HSV-2 concordant negative or HSV-2 discordant highlights the dire need for continuing comprehensive STD prevention programs particularly among high risk population Sub-Saharan Africa.

P1-S5.05 THE EMERGENCE OF HIV PANDEMIC: WHO LIFTED THE LID OF THE AFRICAN SIV-HIV POT? A HYPOTHESIS

doi:10.1136/sextrans-2011-050108.183

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A series of studies established that HIV infection in humans originated from multiple episodes of zoonotic transmission of CD4 T cell-tropic lentiviruses infecting African monkey species—Simian Immunodeficiency Viruses (SIV). HIV-1 derives from the chimpanzee (Pan troglodytes)—SIVcpz, while HIV-2 derives from SIVsm, which naturally infects the Sooty mangabey (*Cercocebus atys*). Pan troglodytes is present across West Central Africa. *Cercocebus atys* have their natural habitat in West Africa (Guinea-Bissau to Cote d'Ivoire). Timing the emergence of HIV-1 in humans: four of the earliest known instances of HIV-1 infection are as follows: A plasma sample taken in 1959 from an adult male living in the Democratic Republic of the Congo. A lymph node sample taken in 1960 from an adult female, also from the Democratic Republic of the Congo. HIV-1 found in tissue samples from an American teenager who died in St. Louis in 1969. HIV-1 found in tissue samples from a Norwegian sailor who died around 1976. An 1998 analysis of the plasma sample dated 1959 suggested that HIV-1 was introduced into humans around the 1940s or the early 1950s. In 2000 the results of a new study suggested that HIV-1 infection occurred around 1931 in West Africa. However, a study in 2008 dated the origin of HIV to between 1884 and 1924. Timing the emergence of HIV-2 in human population: in 2003 molecular timing analysis of two subtypes of HIV-2 (A and B) and SIVsm samples led to conclusion that subtype A had passed into humans around 1940 and subtype B in 1945. The data evidence that Africa was the continent where the transfer of emerged HIV-1 and HIV-2 to humans first occurred. What caused the HIV epidemic to spread so suddenly from African pot in late 70s and early 80s? In this connection let's recall the largest successful worldwide medical intervention in human history—the WHO Smallpox Eradication Programme (1967–1977). Smallpox epidemics had inflicted mankind throughout history, and during 1967 some 10–15 million cases were occurring in 30 endemic countries. In WHO monograph Smallpox and Its Eradication “the chronology and precise timing of the Programme progress was well documented including Africa region: at the end of 1971 smallpox was endemic in only three African countries and was completely eradicated by 1977. Can there be a possible link between the HIV-1/HIV-2 pandemic emergence from West and Central Africa and smallpox eradication?. Smallpox was endemic for most of the countries of West and Central Africa where HIV's originated. Smallpox may be fatal for the most of the HIV-infected immunocompromised persons resulting in interruption of HIV spread. Thus smallpox could be considered as a natural barrier that limited prevalence of newly emerged HIV-1/HIV-2 in local human population. Smallpox eradication probably was the key factor which may contribute the widespread of HIV's in the population of West and Central Africa and the subsequent HIV pandemic emergence”.

Epidemiology poster session 5: Transmission dynamic + behaviour

P1-S5.06 ORAL SEX AND RISK OF SEXUALLY TRANSMITTED INFECTIONS

doi:10.1136/sextrans-2011-050108.184

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Background Oral sex is a common sexual practice in the United States; in 2002, almost 90% of sexually active adults ages 20–44 and