comparisons (B con gp140 IgA: OR = 0.57, p = 0.007, FDR = 0.1). There was no association between ADCC or tier 1 neutralization responses and transmission.
Conclusions: These hypothesis generating results indicate that further studies to examine the role of mucosal IgA and plasma V1V2-specific IgG responses in protection against postnatal HIV-1 transmission may be warranted.

Correlates of Protection in Highly Exposed Seronegative People

P04.01
Withdrawn

P04.02
Molecules Involved in the Vitamin-D Pathway Correlate with Higher mRNA Expression of Anti-HIV Molecules in HIV Exposed Seronegative Individuals

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Background: Vitamin D (VitD) is an endogenous immunomodulator that could protect from HIV-1 infection. We recently found that high levels of VitD and its receptor are associated with natural resistance to HIV-1 infection; up-regulation of the anti-inflammatory cytokine IL-10, and the induction of defensins in mucosa might be part of the mechanisms involved in this association. However, several other molecules might be involved in this protection.
Methods: To further explore this issue, a case-control study using samples of 58 HIV-1-exposed but seronegative (HESN) individuals, and 59 non-exposed healthy controls (HCs) was carried out. mRNA relative units (RU) of APOBEC3G, ELAFIN, TRIM5alfa, SAMHD1 and Catelicidin in peripheral blood mononuclear cells (PBMCs), oral and genital mucosa were quantified by qRT-PCR. Circulating VitD and mRNA levels of VDR were previously reported and used for correlations.
Results: HESNs had significantly higher mRNA RU of the antiviral molecules APOBEC3G and ELAFIN in PBMCs and SAMHD1 and Catelicidin in oral mucosa compared to HCs. Positive correlation between VDR and ELAFIN mRNA in PBMCs of HESNs was found.
Conclusions: These results suggest that high levels of APOBEC3G, ELAFIN, SAMHD1, and Catelicidin are associated with natural resistance to HIV-1 infection. VitD may be upregulating the expression of ELAFIN as observed for other anti-HIV-1 molecules. However, further studies are required to define causal associations.

Family Planning

P05.01
Contraceptive Use and Pregnancy Incidence among VOICE Participants in Uganda

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Background: Recent HIV prevention trials have required use of effective contraceptive methods to fulfill eligibility for enrolment. We compared pregnancy rates in participants enrolled in the VOICE (MTN-003) trial who initiated depot medroxyprogesterone acetate (DMPA) or combined oral contraceptives (COCs) at enrollment (new users) relative to those already on DMPA or COCs.
Methods: Data were analyzed from HIV-1 seronegative participants enrolled in Uganda. Prior to enrolment, information on contraceptive type and initiation date was obtained; contraception was provided to new users. Participants received urine pregnancy tests at monthly follow-up visits. Cox proportional hazards models stratified by baseline contraceptive method were used to compare pregnancy incidence among new users (initiated ≤ 60 days prior to enrollment) and established users (initiated > 60 days prior to enrolment). Participants were censored after the first observed pregnancy on study.
Results: Of 322 women enrolled, 296 were COC or DMPA users; 82 (28%) were new users (50 [61%] initiated DMPA and 32[39%] initiated COCs) and 214 (72%) were established users. Overall pregnancy incidence was 13.35 per 100 person-years [p-yrs] (49/367 p-yrs), with an incidence in DMPA users of 5.39 per 100 p-yrs (13/241 p-yrs) compared to 28.62 per 100 p-yrs (36/126 p-yrs) in COC users. In new DMPA users, pregnancy incidence was 10.20 per 100 p-yrs versus 3.48 per 100 p-yrs in established DMPA users (adjusted hazard ratio [aHR] = 2.84; 95% confidence interval [CI] 0.92 - 8.74). Similarly, in new COC users, pregnancy incidence was 42.67 per 100 p-yrs versus 23.67 per 100 p-yrs in established COC users (aHR 2.08; 95% CI 1.02 - 4.23).
Conclusions: New contraceptive users in VOICE had an increased pregnancy risk. Pregnancy incidence was high among both new and established COC users. New DMPA and all COC users participating in HIV prevention trials may benefit from intensive contraceptive counseling and provision of less user-dependent methods.

P05.02
Stop and Save Children from HIV! Rural-urban Differentials, Barriers and Motivators of Long-term Contraception in Zimbabwe, Mixed Methods Results

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Background: Socio-economic and biologic vulnerabilities predispose women to HIV infection, leading to higher maternal risk and infection of babies. Contraception lowers HIV incidence, viral load, pregnancy and vertical transmission. Long-acting reversible contraceptives (LARCs) - implants and IUDs - help overcome access barriers, common in poverty,