

examination. And on rectal smear microscopy, 31.5% had pus cells (OR 2.16, $p < 0.001$) and 44.1% had gramme negative diplococci with/without pus cells (OR 1.60, $p = 0.016$).

Algorithms using ano-rectal symptom as entry point had poor sensitivity (0.8%). The algorithm using receptive anal sex and/or complaint of ano-rectal discharge as the entry point, and subsequently using proctoscopic and/or rectal smear findings had a sensitivity, specificity and positive predictive value of 41.7, 66.3 and 17.5, respectively. By adding risk assessment, the algorithm performance values changed to 81.9, 20.1 and 14.9, respectively.

Conclusion Effectiveness of flow-charts for syndromic management of ARD is constrained by the asymptomatic nature of rectal NG/CT. Algorithms including receptive anal sex at entry point and applying risk assessment, clinical and rectal smear examination may be useful for management of rectal NG/CT in resource limited settings, until cheaper, reliable and feasible laboratory tests are made available.

P2.177 DYSpareunia AMONG WOMEN AGED 40 TO 60 YEARS INFECTED WITH HIV

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Background Psychosocial aspects of HIV infection and use of medications may be associated with dyspareunia. In middle-aged women there's also problems associated with climacteric symptoms that may influence the presence of dyspareunia, a topic not fully investigated in women with HIV in the ageing process.

Methods Cross sectional study involving 273 women aged 40–60 years. From these 128 women informed having sexual activities with vaginal penetration and were included in the present study. The evaluation instrument was based on the Short Personal Experiences Questionnaire (SPEQ). Sociodemographic, clinical, behavioural, reproductive, HIV issues and partner-related factors were assessed. Dyspareunia was defined as pain during sexual intercourse, graded from 1 to 6, where a score of 2 or more represented the presence of dyspareunia. A bivariate analysis was performed in which dyspareunia was considered the dependent variable according to the independent variables. The chi-square test was applied with Yates correction or Fisher's exact test.

Results A total of 41.4% (53) of these women reported dyspareunia. It was associated with low formal education ($p < 0.10$), vaginal dryness ($p < 0.001$), urinary incontinence ($p = 0.02$), muscular pain ($p = 0.013$), partner status HIV+ or unknown ($p = 0.02$), and use of statins ($p > 0.05$ and < 0.10). Dyspareunia was less prevalent in women who were in use or previously used biovir ($p < 0.05$) or efavirenz ($p < 0.05$). compared with non-users of these medications.

Conclusions Dyspareunia was common in this cohort of women associated with social, health, partner and medication factors and measures should be adopted to minimise the repercussions of these factors on sexuality.

P2.178 CONDYLOMA ACUMINATA, TREATMENT WITH LIQUID NITROGEN AND TCA

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Condyloma acuminata is the infection caused by Human Papilloma virus. Condyloma acuminata are soft, skin coloured, fleshy warts, can appear solitary or in a group and can be both small and large. They appear in the vagina, on the cervix, around the external genitalia and rectum, in the urethra and anus. The warts can also appear in nasal,

oral and laryngeal form and occasionally occurs in the throat. The disease is highly contagious. The incubation period may take from one to six months Sexually transmitted diseases affect the sexually active population being in the reproductive age group and usually are being transmitted in venereal form. For treatment of genital warts, clinician and patient choose treatment based on morphology and distribution of lesions. During our studies have found that from 226 patients with CA 182 were male and 44 were female. Patients were aged 1–58 years. Treated with liquid nitrogen and own 196 of them were 159 male and 37 female. Treated with TCA were 30 persons, of whom 23 males and 7 females. Treatment with Liquid Nitrogen the majority of patients was extended after 10–15 mal treatment and subjective feeling easily tolerated by patients. Treatment with TCA was the majority of patient successful after first treatment, and the smallest number have had a need to be treated to three times, associated with more severe subjective feeling. Treatment with Liquid Nitrogen is boring, and TCA, although associated with more severe subjective feeling accepted as the most efficient method by patients.

- In total 14 patients smoker treatment was prolonged and resistant to two types of therapy.
- Relapse after treatments were more often in the group of patients treated with Liquid Nitrogen to 3% of patients.

P2.179 EXPOSURE TO NEISSERIA GONORRHOEAE (GC) DURING THE PERIMENSTRUAL PERIOD MAY INCREASE RISK OF INFECTION IN FEMALE GC CONTACTS

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Previous studies have shown that a woman is more likely to be diagnosed with gonococcal (GC) infection during the first five days of her menstrual cycle (active menstruation) than during the rest of her cycle. However, no correlation has been established between risk of infection and the phase of a women's menstrual cycle at the time of exposure. In this study, risk of GC infection was correlated to female menstrual cycle phase according to the woman's stated date of last menstrual period and stated date of GC exposure.

Women ages 16–40 that presented to the Baltimore City Health Department STD Clinic as contacts of known GC positive sexual partners were enrolled. Risk of GC infection was compared to calculated phase of menstrual cycle: perimenstrual period (–5 to +5 days since LMP), late follicular (days 6–12), periovulatory (days 13–16), and early luteal (days 17 to –6 day since LMP).

58 female GC contacts were enrolled. Women who presented > 32 days after GC exposure or whose LMP was > 32 days at presentation where excluded. Of the 29 patients that met inclusion criteria, 11(38%) were GC negative and 18 (62%) were GC positive (by culture and subsequent NATs). Eighty percent (8/10) of women in the perimenstrual, 38% (3/8) in the late follicular, 80% (4/5) in the periovulatory, and 50% (3/6) in the early luteal phases were GC positive. Fifty-three percent (7/13) of HC users were GC positive.

Increased risk of GC infection during the perimenstrual period may be, in part, due to lower lactoferrin concentration, lower level of iron sequestration, and higher level of free iron in the female genital tract. Increased risk of GC infection surrounding ovulation may be due to higher lutropin receptor (known GC ligand) expression in the female GU tract at ovulation.

P2.180 TMR5 (ZEDUPEXTM) AS A MANAGEMENT THERAPY FOR HERPES INFECTIONS: RESULTS OF PRECLINICAL EVALUATIONS

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TMR5 (Zedupex™) is a product of a Kenyan medicinal plant, prepared as a lyophilized extract and a cream. The products have been evaluated for preclinical safety and efficacy in suitable *in vitro* and *in vivo* systems of herpes infections. Herpes is a viral infection affecting over 60% of the sub-Saharan Africa young adult population. It is caused by two similar viruses, HSV-1 and HSV-2 which share 50% gene sequence homology. The infection is a major cause of genital ulcer disease, associated with increased risks of HIV acquisition and transmission. The aim is to develop TMR5 as an alternative anti-herpes agent, this being necessitated by increased resistance to available drugs and the cost of the drug of choice, acyclovir, in the region. Using the trypan blue exclusion test, plaque inhibition and viral yield reduction assays for assessment of cytotoxicity (CC₅₀) and efficacy (EC₅₀), and Mice and guinea pig cutaneous and genital HSV infection models respectively following oral and topical treatments, TMR5 exhibited no cytotoxicity in mammalian cell lines with a wide therapeutic index (CC₅₀ ≥ 58.5 ± 4.6 µg/ml). An EC₅₀ of ≤ 14.7 ± 3.7 µg/ml for both wild type and resistant strains of HSV was realised in plaque and viral yield assays. Oral (250 mg/kg) and topical (10% cream) administrations exhibited significant delay in onset of infections, hindered progression of infection to lethal forms with increased mean survival times and low mortality in both mice and guinea pig models. No acute toxicity has been realised at the therapeutic concentrations. TMR5 has demonstrated a high potential as an anti-herpes agent and arrangements are presently underway to evaluate its efficacy and safety in human clinical trials. A pilot production scheme supported by the National Commission for Science, Technology and Innovation (NCSTI) of Kenya has been undertaken as means of developing TMR5 as an alternative management therapy for herpes infections.

P2.181 IL-4, IL-10 AND TNF- α PROFILE IN NORTH-EASTERN UKRAINIAN HIV-1 INFECTED INDIVIDUALS WITH DIFFERENT LEVEL OF IMMUNODEFICIENCY

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Background Aim of the study was to determine the IL-4, IL-10 and TNF- α profiles in plasma of north-eastern Ukrainian HIV-1 infected individuals with different CD4 T-cell levels.

Methods We used an immunoassay method to measure IL-4, IL-10, TNF- α in plasma of 118 HIV-1 infected people among whom there were 80 (67.8%) men and 38 (32.2%) women aged (32.61 ± 0.87) years. Patients were divided into groups depending on the levels of CD4 T lymphocytes. Group I included 52 people with T-helper cell counts ≥ 350 cells/µL, group II - 66 patients with T-helper cell counts ≤ 200 cells/µL. Comparison group consisted of 30 normal healthy individuals.

Results In the cytokine profile of HIV-1 infected people the increased levels of pro-inflammatory cytokine TNF- α compared to controls (group I - (0.77 ± 0.08), group II - (2.34 ± 0.69), healthy controls - (0.51 ± 0.32) pg/mL, $p < 0.05$) and the anti-inflammatory IL-10 (group I - (3.99 ± 0.99), group II - (20.08 ± 0.44), healthy controls - (1.68 ± 0.32) pg/mL, $p < 0.001$) were demonstrated. No significant difference in IL-4 between surveyed troops and comparison group was found.

Patients with CD4 T lymphocyte levels ≤ 200 cells/µL showed significantly higher plasma concentration of TNF- α and IL-10 compared with the group I ($p < 0.05$). Among HIV-1 infected from group II mean serum concentrations of TNF- α higher than that of group I in 3 times ($p < 0.05$). A significant increase in the concentration of IL-10 detected in patients with severe immunodeficiency (IL-10 levels in group II was 5 times higher, $p < 0.05$), which may indirectly indicate a more active involvement of IL-10 during disease progression.

Conclusion HIV-1 infection was associated with an increase in levels of TNF- α and IL-10. Immune imbalance due to changes in concentrations of cytokines is more pronounced in HIV-infected individuals with severe immunosuppression with CD4 T lymphocyte counts ≤ 200 cells/µL.

P2.182 MALE GENITAL DERMATOSES IN HIV

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Background Little information exists about penile squamous cell carcinoma (PSCC), penile carcinoma in situ (PCIS) and male genital lichen sclerosus (MGLSc) in HIV.

Methods A retrospective review of case notes was performed on HIV-positive men who had presented to specialised Male Genital Dermatoses Clinics between May 2011 and February 2013.

Results 39 men were identified. The mean age at diagnosis was 48 years (range 26 – 71 years). The mean diagnostic delay was 20 months (range 1 – 72 months). 35 were uncircumcised at presentation (4 were circumcised at birth/childhood). The majority of the cases had PCIS (21); 8 had MGLSc, 2 had lichen planus (GLP), 2 had PSCC and the remaining cases had more than one diagnosis (1 had PSCC and MGLSc, 2 had PSCC and PCIS, 3 had PCIS and MGLSc); 6 men had co-existing anal dysplasia (2 had anal SCC); 36 were on ARVs. All genital dermatoses were treated according to our residential practise. The majority (31) is in remission; 6 have residual disease and receive ongoing treatment (1 GLP, 1 MGLSc and 4 PCIS); 2 have been lost to follow-up; most (32) have been circumcised (including 4 circumcised at birth/childhood). 1 has a short foreskin hence circumcision is not indicated.

Conclusion Advances in ARV treatment have improved the survival of individuals with HIV. This has led to increased interest in long-term morbidities, including cancer. MGLSc and PCIS can progress to invasive cancer. The risk of PSCC in HIV despite ARV treatment is x5–6. The presence of the foreskin confers cancer risk. Uncircumcised HIV men should be counselled about the risk of PSCC. There may be an argument for prophylactic circumcision in high-risk cases such. Certainly, clinicians should enquire about the genital health of HIV-positive men and undertake regular (ano) genital examination at follow-up.

P2.183 CLIMACTERIC SYMPTONS AND ASSOCIATED FACTORS IN HIV SEROPOSITIVE WOMEN

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Background In the menopausal transition, the occurrence of insomnia, genito-urinary, psychological and vasomotor symptoms may occur and this may be aggravated by the diagnosis of HIV infection.

Methods Cross-sectional study including 273 HIV-infected and 264 HIV uninfected Brazilian women. They were submitted to an interview to assess climacteric symptoms, socio-demographic characteristics and weight and height measurement.

Results The average age was 47.7 ± 5.8 years in HIV seropositive women and 49.8 ± 5.3 years in seronegative ($p < 0.001$). Bivariate analysis showed a lower prevalence of vasomotor symptoms in the HIV-positive Group ($p = 0.009$), specifically hot flushes ($p < 0.002$) and sweating ($p = 0.049$). Vaginal dryness was less prevalent in HIV-positive ($p < 0.005$). Depression and insomnia showed no statistical