

Background The incidence of syphilis has increased in Hungary (6.3/100000 in 2012), with simultaneous increase in neurosyphilis incidence. The aim of this study is to summarise our experience on clinical and serological characteristics, the treatment results, and association with HIV-infection.

Methods clinical, serological and cerebrospinal fluid (CSF) analysis: RPR/VDRL, TPPA/TPHA, TP ELISA, TP IgM/IgG Western blot, albumin, mononuclear cell count of 8 patients with neurosyphilis. The diagnosis of neurosyphilis was based on clinical symptoms, syphilitic serology, the positive results of VDRL and/or TPHA tests, and the increased number of mononuclear cells in CSF.

Results The 7 male and 1 female patients were between 25 and 84 years of age. 4 male patients were HIV-positive, 3 of them were MSM, one was bisexual. 5 patients had neurosyphilis with symptoms such as headache, dizziness, central facial palsy, visual impairment, sensory loss, diminished tendon reflexes.

Asymptomatic patients had schizoaffective disorder, visual impairment, syphilitic reinfection respectively, neurological symptoms were observed more frequently in patients with HIV-infection.

TPPA/TPHA test in 7 patients', VDRL test in 3 patients' and increased number of mononuclear cells in 7 patients' CSF were positive. All patients were treated with high dose intravenous benzyl penicillin (24 million units iv. daily for 14 days), the effectiveness of treatment was documented by the improvement in clinical symptoms and by the decrease of RPR titer.

Conclusion The clinical course was similar in patients with HIV and without it. One third of patients with neurosyphilis was symptoms free, the remaining of them presented clinical symptoms of neurosyphilis. The adequate indication of CSF examination is essential for the diagnosis of neurosyphilis. The long-term penicillin therapy was effective in our cases.

P2.191 DC-SIGN,DC-SIGNR AND SDF-1 POLYMORPHISM IN HIGH RISK SERONEGATIVE SEXUALLY TRANSMITTED DISEASE PATIENTS FROM NORTH INDIAN

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Background Dendritic cells are the first to encounter HIV-1 at mucosal sites and virus binding occurs via receptors known as DC-SIGN/R. Variations in the number of repeats in the neck region of DC-SIGN/R are reported to possibly influence host susceptibility to HIV-1 infection. A single nucleotide polymorphism (SNP) in SDF-1, the natural ligand for the HIV-1 co-receptor CXCR4, is implicated to have protective effects against HIV-1 infection.

Methods The repeat region polymorphisms in DC-SIGN/R by PCR and SNP of SDF1-3'A by PCR-restriction fragment length polymorphism (RFLP) in 230 healthy HIV seronegative individuals, 200 high risk sexually transmitted disease (STD) patients seronegative for HIV and 230 HIV-1 seropositive patients from northern India. The study was approved by the institutional ethics committee.

Results The frequency of homozygous DC-SIGNR 7/7 genotype and allele 7 was significantly higher in patients infected with HIV-1 ($P < 0.0001$) whereas frequency of heterozygous DC-SIGNR 7/5 genotype and allele 5 was significantly higher in high risk STD patients seronegative ($P = 0.003$). The heterozygous DC-SIGNR genotypes 7/5 and allele 5 was associated significantly with high CD4⁺ T-cell count and low viral load compared to homozygous DC-SIGNR 7/7 genotype and allele 7 in patients infected with HIV-1. DC-SIGN genotype 7/7 was most frequent in all three groups. A significantly higher frequency of SDF1-3'A/SDF1-3'A was observed

in high risk STD patients as compared to HIV seropositive ($p = 0.005$) and healthy HIV-1 seronegative tested individuals ($p = 0.001$).

Conclusion The significant higher frequency of heterozygous DC-SIGNR 7/5 and SDF1-3'A genotypes in high risk STD patients and with high CD4⁺ T-cell count and low viral load in HIV-1 seropositive patients suggesting the protective role of this genotype in HIV-1 infection.

P2.192 VAGINAL EPITHELIAL THICKNESS AND SERUM HORMONE LEVELS BY BODY MASS INDEX AT THE LUTEAL AND FOLLICULAR PHASES OF THE MENSTRUAL CYCLE

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Background Obesity is increasing in the United States and is associated with reproductive disorders. Little is known regarding the precise mechanisms by which obesity impacts reproductive health, but many studies have shown alterations to endocrine function in obese women. Further, the endocrine system alters immune system function and regulates vaginal epithelial thickness. Thus, obesity could alter susceptibility to sexually transmitted infections via two distinct biological pathways.

Methods We analysed pre-product use data from a 101 women (aged 18 to 40) with normal menstrual cycles in a Phase I trial to assess the association between body mass index (BMI ≥ 30 compared to BMI < 30), serum hormone levels and vaginal epithelial thickness at two points in the menstrual cycle, the luteal and follicular phase, based on self-reported last menstrual period (LMP). We collected vaginal biopsies at each visit for analysis of epithelial thickness and count of basal, transitional and superficial cell layers, and blood samples for circulating hormone levels. We used median rank sum tests and linear regression models to compare outcomes by BMI status, adjusting for a priori hypothesised confounders.

Results While there was no difference in total median vaginal epithelial thickness between obese and non-obese women, obese women had fewer layers of superficial vaginal epithelium (median of 15.4 vs. 13.3 layers, $p = 0.04$) than their non-obese counterparts during the luteal phase, even after adjusting for race, age, parity and education (as a marker of socio-economic status, $p = 0.08$). In preliminary analysis, obese women had significantly lower median estrone (E1) and progesterone (P4) plasma levels than non-obese women during the luteal phase. No significant differences were seen in the follicular phase.

Conclusion The effect of obesity on the endocrine system could alter the cervico-vaginal milieu and, thus, women's susceptibility to sexually transmitted infections. Further research is warranted to explore this causal pathway.

P2.193 OCULAR SYPHILIS IN HIV-NEGATIVE PATIENTS

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Background Ocular syphilis is reemerging in the last decade in several countries around the world. However, little is known about the clinical and Cerebrospinal fluid (CSF) characteristics in HIV-negative individuals.