

methods for diagnosis of *Neisseria gonorrhoeae* and *Trichomonas vaginalis* infections. However, PCR was available for testing for *Chlamydia trachomatis*, *N. gonorrhoeae*, *Mycoplasma genitalium*, *Gardnerella vaginalis*, *M. hominis* and *Ureaplasma urealyticum* using Russia-produced diagnostic tests. Serology remained in use for diagnosis of chlamydial infection and trichomoniasis. No appropriate and complete quality assurance and control system was available.

**Conclusions** In Tver, Russia, the detection of several STI agents has to be optimised, and international evidence-based standards and appropriate quality management systems introduced. Beneficially, the laboratory diagnosis is further centralised, which makes it easier to implement appropriate international evidence-based STI guidelines.

**P2.024 EVALUATION OF THE GENITAL MICROBIOTA IN MEN AND WOMEN USING AN AUTOMATED SYSTEM FOR ANALYSIS OF MICROSCOPY IMAGES OF WET AND STAINED SMEARS**

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**Background** In Russia, microscopy of the genital microbiota in both women and men are performed at laboratory, not at physician's office. Microscopy is a simple and cheap method, which, together with a clinical presentation, provides sufficient information for diagnosis of bacterial vaginosis, vulvovaginal candidiasis, trichomoniasis, cervicitis, urethritis. Improvement of microscopy diagnostic methods with the use of automated computerised system is important.

**Methods** Clinical samples were obtained from 100 men and 150 women of reproductive age. In total, 150 vaginal, cervical and female urethral samples, 73 male urethral samples and 17 prostatic samples were analysed using microscopy of Gram and methylene blue stained preparations. The presence of polymorphonuclear leukocytes, lactobacilli, "clue" cells, yeasts, trichomonads, gram-negative diplococci was assessed. Vaginal samples were also assessed for bacterial vaginosis using the Nugent score. For analysis, image analyzer including a Biological Microscope MT5000 Series, Neiji Techno Co., Ltd (Japan), digital colour camera Progress CT3 and software UroGyn were used.

**Results** In 17.33%, 11.33% and 2% of the vaginal samples, "clue" cells, yeasts and trichomonads were visualised by microscopy. Signs of cervicitis were detected in 2% of the women, in none of the female samples signs of urethritis were seen. In men, signs of urethritis were revealed in 3.45%, and prostatitis - in 29.4% of the samples. In none of the samples, Gram-negative diplococci were detected. There was complete agreement between the results obtained using the image analyzer and those obtained using traditional light microscopy.

**Conclusion** An automated system for the analysis of images obtained by microscopy investigation of urogenital samples from women and men is easy to use, allows documentation of results and facilitates their interpretation.

**P2.025 ETIOLOGY OF RESPIRATORY TRACT INFECTION IN HIV/AIDS PATIENTS AT THE NATIONAL HOSPITAL OF TROPICAL DISEASES (NHTD) HANOI, VIETNAM**

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**Background** Respiratory tract infection is leading causes of death among patients infected with human immunodeficiency virus in Vietnam. Identification the agents caused RTIs is very important to give specific treatment and to reduce mortality rate among HIV/AIDS patients suffering from RTI.

**Methods** We conducted a cross-sectional study of 170 HIV/AIDS patients with signs and symptoms (clinical manifestations and/or broncho aveolar lesions through X-ray chest film) of respiratory tract to indentify the common agents by analysing bronchoaveolar-lavage (BAL).

**Results** A total of 170 HIV/AIDS patients (138 male and 32 female) involved in the study and 170 BAL samples had been taken to identify the common agents caused RTIs. 148/170 (87.1%) patients had been diagnosed RTIs with following agents: *Mycobacterium tuberculosis* 79/148 (53.4%), PJP 12/148 (8.1%), bacteria 59/148 (39.9%), fungi 54/148 (36.5%) and CMV 2/148 (1.4%). 52/148 (35.1%) patients had been isolated 2 differential agents at a moment. Most patients have very low CD4+ count (80.4%  $\leq$  100cells/mm<sup>3</sup>; mean = 74.6; SD = 118.7; median = 22). The more common bacteria are: *Pseudomonas* (*Paeruginosa*, *P.putida*, *P.pneumotropica*) 15/59 (25.4%), *Streptococcus* (*S.pneumoniae*, *S.pyogene*) 11/59 (18.6%), *Acinobacter* (*Aci.baumani*, *Aci.juni*, *Aci.minimus*) 6/59 (10.2%), *E.coli* 3/59 (5.1%) and *S.aureus* 3/59 (5.1%). Other include: *H.influenza* 2/59 and each following spp have 1: *Achromobacter xylooxidans*, *K.pneumoniae*, *Enterobacter clocae*, *Moraxella catarhalis*, and *Rhodococcus equi*. Isolated fungal spp include: *Candida albicans* 32/54 (59.2%), *Penicillium marneffei* 14/54 (25.9%), *Aspergillus* spp 4 (7.4%), *Candida* spp 3/54 (5.6%) and *Cryptococcus neoformans* 1/54 (1.9%). The common complex infections are MTB-Fungi (16 patients), MTB-Bacteria (14 patients) and Bacteria-Fungi (11patients).

**Conclusion** *Mycobacterium tuberculosis*, bacteria (*Paeruginosa*, *P.putida*, *P.pneumotropica*, *S.pneumoniae*, *S.pyogene*, and *Aci.baumani*) and fungi (*Candida albicans* and *Penicillium marneffei*) are the more common in HIV/AIDS patients who have RTIs. Because of advanced immune depression, patients may have complex infections in a moment.

**P2.026 AUDIT OF ADHERENCE TO UK NATIONAL GUIDELINE FOR MANAGEMENT OF EPIDIDYMO-ORCHITIS**

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**Background** The UK guideline for epididymo-orchitis management makes recommendations about appropriate diagnostic tests, treatment regimes and health promotion principles. This audit compares our clinic's performance with reference to these guidelines.

**Methods** Case notes of patients diagnosed with epididymo-orchitis over seven months were reviewed. Details of sexual orientation, investigations, treatment and management were recorded.

**Results** There were 84 patients comprising 61(71.2%) heterosexual men, 22(26.2%) men who had sex with men (MSM), and 1(1.2%) bisexual man. Fifty one (60.7%) men had all four recommended microbiological investigations of gramme stained urethral smear, urethral swab for *N. gonorrhoeae* culture, first pass urine (FPU) for nucleic acid amplification tests for *N. gonorrhoeae* and *C. trachomatis*, and microscopy and culture of mid-stream urine (MSSU) for bacteria. Of the 84 patients, 81(96.4%) had 3 tests taken of urethral smear, swabs and FPU, but MSSU was only performed in 57(67.9%) men. Ten (11.9%) men were diagnosed with chlamydia and 3(3.6%) with gonorrhoea, and 82(97.6%) patients received appropriate antibiotic treatment according to the guidelines. Advice on rest, analgesia and scrotal support was poorly documented (9.5%; 9.5%; 8.3% respectively). Guidance about abstinence from sex and partner notification (PN) was documented in 65(77.4%) cases and explanation about the condition recorded in 54(64.3%) cases. A leaflet was offered in 3(3.6%) cases. Seventy six (90.5%) patients had a follow up appointment offered at 2 weeks but only 42(55.3%) patients attended. At the review, PN was completed for all patients. A written action plan was recorded in 100% of men with ongoing symptoms.

**Conclusions** Recommended antibiotic treatment was nearly always offered to patients. However general advice and written documentation were poor and non-attendance at follow up was high. Urine culture testing and documentation should be significantly improved for initial management, and a robust system developed to assess compliance with treatment, PN and symptom resolution.

**P2.027 GENEXPERT GBS AND CT/NG REAL TIME PCR ASSAYS AS INNOVATIVE TOOLS FOR CERVICO-VAGINAL INFECTIONS' SCREENING**

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**Background** Group B Streptococcus (GBS), Chlamydia trachomatis (CT) and Neisseria gonorrhoeae (NG) cervico-vaginal infections can be involved in pregnancy complications such as preterm birth and premature rupture of membrane (PROM). These infections can also be transmitted to the newborn during delivery leading to serious consequences. Therefore, CDC guidelines suggest microbial prenatal screening for administration of target prophylaxis based on culture results. To accurately predict the colonisation of genital tract, the test should be better performed during labour, because microbial presence may be transient/intermittent and re-colonisation can occur. GeneXpert®GBS and GeneXpert®CT/NG tests (Cepheid), fully-automated, easy-to-use and rapid PCR-assays (about 45 and 90 min, respectively) can be the right alternative to culture tests (at least 72 hours).

This study evaluates the advantages of GeneXpert®GBS in the management of women, with unknown cervico-vaginal microbial status, during labour. Moreover, it assesses whether the prevalence of CT, NG and GBS infections is higher in pregnancy complicated by preterm labour or PROM.

**Methods** During a four months' period, all women with singleton pregnancy at beginning of labour either-term or preterm or PROM were enrolled. Exclusion criteria were planned caesarean section or recent use of systemic or topical antibiotics. Cervico-vaginal (for CT/NG) and vaginal-rectal (for GBS) swabs were collected from each patient and analysed by GeneXpert®GBS and GeneXpert®CT/NG assays on GeneXpert®System.

**Results** CT/NG screening showed positive results only among PROM pregnancies (2.5% CT positive) while no positive results were found among preterm/term pregnancies.

Among pregnant women analysed for GBS, 24.4% resulted positive and 75.6% negative. Only positive patients received IAP, instead of current guidelines, for which all patients would have been treated due to unknown GBS infection status.

**Conclusion** With GeneXpert®GBS test, we could correctly manage all women and reduce administration of IAP. We calculated that the savings for the hospital was 3,500 EUR every three months.

**P2.028 EVALUATION OF THE VAGINAL MICROBIOTA USING QUANTITATIVE REAL-TIME PCR**

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**Background** For characterization of the vaginal microflora, it is often necessary to assess quantities of microorganisms. The study objective was to evaluate vaginal microflora in norm, bacterial vaginosis (BV) and vulvovaginitis (VV) using quantitative real-time PCR.

**Methods** A total of 255 women of reproductive age, who addressed a gynaecologist due to vaginal discharge, were included

in the study. BV was diagnosed using the Amsel criteria and the Nugent score. VV was diagnosed on the basis of clinical presentation and microscopy results. The patients were divided into 3 groups: healthy (n = 128), BV (n = 48) and VV (n = 79). Vaginal swabs were analysed using a real-time PCR test (Femoflor, DNA-Technology, Russia), which assesses total bacteria, lactobacilli, anaerobic bacteria and genital mycoplasmas. The quantities of the microorganisms were summarised as median values in each group of patients.

**Results** In the group of healthy women, total bacteria were present in a median load of  $7.9 \times 10^6$  DNA copies per reaction, in BV group -  $3 \times 10^7$ , in VV group -  $6.7 \times 10^6$ . The median loads of lactobacilli in the group of healthy women, BV and VV groups were  $4 \times 10^7$ ,  $1.4 \times 10^4$  and  $1.6 \times 10^6$  copies per reaction, respectively. Quantities of *Gardnerella vaginalis/Prevotella bivia/Porphiromonas spp.* in the three groups were  $2.5 \times 10^2$ ,  $8.7 \times 10^6$  and  $5.8 \times 10^2$  copies per reaction, respectively. *Megasphaera spp./Veillonella spp./Dialister spp.* were present in the three groups in loads of 1,  $4.3 \times 10^5$  and  $5.8 \times 10^1$  copies per reaction, respectively. *Atopobium vaginae* was found in the three groups in quantities of 1,  $2.1 \times 10^6$  and 1 copies per reaction, respectively. The median values of *Mycoplasma hominis* were equal in the three groups (median values 1 copy per reaction). The quantities of *Ureaplasma urealyticum/parvum* were  $1.4.9 \times 10^2$  and 1 copies per reaction, respectively.

**Conclusion** Real-time PCR is a fast and accurate tool for the assessment of the vaginal microbiota.

**P2.029 ALL THAT IS GENITAL IS NOT VENEREAL**

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**ALL THAT IS GENITAL IS NOT VENEREAL**

Unusual cases with lesions on genitals

Genital disease (GD) has a broad spectrum. Though sexual transmission obviously plays a major role in its pathogenesis, many diseases with genital presentation are not sexually transmitted diseases (STD) but due to strong clinical resemblance cause a lot of diagnostic confusion and therapeutic misadventures. We report 4 such cases.

**Case 1 and 2** A 35 yr old female presented with recurrent attacks of itchy, painful lesions over the genitals along with musculo-articular symptoms. On examination there were classical "knife cut ulcers" over the labia, perianal areas and inframammary folds.

Another 26 year old unmarried female presented with vulvar lesions. Indurated tender swelling, ulceration of the vulva, violaceous plaques with edoema were present.

Histopathology showed epitheloid cell granuloma with occasional Langhans giant cells. Clinicopathological correlation clinched both cases as *Metastatic Crohn's disease* which responded to a course of oral metronidazole and corticosteroids.

**Case 3** A young male presented with penile swelling, multiple discharging ulcers since 2 months. There was distortion of the shape and multiple shallow necrotic ulcers on the shaft of the penis with phimosis. Non-tender right inguinal lymphadenopathy. Biopsy showed multiple tuberculoid granulomas. Mantoux test was strongly positive with high ESR suggesting *Genital Tuberculosis*. The patient was started on AKT. 3 weeks later ulcers healed with destruction of overlying skin.

**Case 4** A 56 year old married male came with raised lesions and a glazed whitish discolouration of glans penis with phimosis and thinning of urinary stream.

Biopsy revealed atypical undifferentiated cells and horn pearls. Imprint cytology and FNAC were done and a final diagnosis of *Squamous Cell Carcinoma* was made which required partial amputation of penis.