The prevalence of syphilis with RP and TPHA was 0.9% (12/1400). RTs for syphilis showed > 90% sensitivity and 100% specificity. RTs for C trachomatis showed a low sensitivity between 22 – 37% and a 99% specificity. RTs for N gonorrhoeae showed 97%.

Conclusions In women with symptoms of LGTIs RTs used at the point of care for syphilis have a sensitivity > 90%. RTs for CT have sensitivity < 40% and RTs for NG have sensitivity < 12.5%.%

Background The knowledge about approaches used for diagnosis of STIs in Ukraine is scarce. Aiming to optimise the laboratory diagnosis of STIs and introduce antimicrobial resistance surveillance for Neisseria gonorrhoeae, we aimed to survey the algorithms, methodologies and reagents used, and the laboratory capacities and possibilities in three regions of Ukraine.

Methods Laboratories of three regions of Ukraine, namely Dnepropetrovsk, Ternopil and Zaporoz were visited and detailed interviews were conducted.

Results The three main dispensaries visited serve both the corresponding region as well as the city needs, and also have their own outpatient clinics. Large number of samples is tested, for example in Dnepropetrovsk and Zaporoz yearly 41,000 and 26,000 samples are tested by culture for gonococci, respectively. The majority of samples are coming from gynaecologists and only 0–0.4% contains gonococci. In contrast, testing 4,000 to 10,000 venereology patients per dispensary and year reveals 4–9% of positive samples in all three regions. PCR equipment is available in Dnepropetrovsk and Zaporoz, however, this is rarely used because of lack of funding from the state. Nevertheless, in the private laboratories PCR is run using variety of reagents. Gonococcal culture is primarily performed using Russian or Ukrainian selective growth media. Chlamydia trachomatis and Treponemmas vaginalis are not isolated by the laboratories, and the tests for syphilis are performed using rapid tests.

Conclusions The structure of laboratory services differs among different regions of Russia. In order to apply to international standards initially analysis of the organisational structure, methods and methodologies used is necessary. This study reviewed the features of the laboratory diagnosis of STIs in the Tver region, central Russia.

Methods A questionnaire-based survey concerning STI laboratory services in the Tver region was conducted.

Results The Tver region consists of 36 districts, with 1.3 million inhabitants (406,000 in the Tver city). The vast majority of the laboratories are owned by the State, however, a few privately owned laboratories are also present. The State-owned laboratories are divided into peripheral-district branches, most of them run mainly serology of syphilis and microscopy of genital smears. The remaining laboratory diagnostics is performed at the centralised laboratory at Center of Specialized Medical Aid in Tver. This laboratory examines samples sent from the regional branches and different city medical institutions, as well as samples collected from patients consulting physicians at its own Center. The test result is delivered either to the treating physicians or directly to the patient. Microscopy of Gram and methylene blue stained smears were the main
methods for diagnosis of Neisseria gonorrhoeae and Trichomonas vaginalis infections. However, PCR was available for testing for Chlamydia trachomatis, N. gonorrhoeae, Mycoplasma genitalium, Garderella 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, 75 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 17.3%, 11.3% 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.