the improvement of selective diagnostic nutrient media for the detection of *T. vaginalis* is so important.

The purpose of the study was to increase the selectivity and growth properties of the nutrient medium for the *T. vaginalis* detection. It was necessary to select a concentration of amphotericin B in media with different content of horse serum and peptone enzymatic, which inhibits the growth of *Candida* spp., but doesn't affect the growth of *T. vaginalis*.

For the research, an experimental mediums (based on the SVT medium (RU FSS No. 2009/05982), produced by the Pasteur Institute) were prepared with different content of horse serum (10%, 20%, 40%), half of which were with enzyme peptone (12.8 g/l) and all of them without antimycotics. Two dilutions of amphotericin B in the range of concentrations of 0.5–50 μg/ml, as well as fluconazole at a concentration of 264 mg/ml (as in the SVT) were introduced into all experimental media. The strains of *T. vaginalis* (T1, T5, T7, T11) from the Pasteur Institute collection in concentration 0.5×10^6 cells/ml and the standard strain *Candida albicans* ATCC 24433 in concentration 10^7 cells/ml were sown in all medias in three recurrence. The incubation temperature was 35±1°C. Counting the number of cells was carried out using the Goryaev chamber every day for a week. After 24 hours, *C. albicans* were sowed onto the Müller–Hinton agar for testing the suppression of their viability with subsequent microscopy.

It was revealed, that optimal accumulation of *T. vaginalis* (2.5×10^6 cells/ml) and inhibition of *C. albicans* occurs at concentration of amphotericin B (2–0.5) μg/ml. The activity of fluconazole to *C. albicans* in these media was low. It should be noted, that in medias with a high content of horse serum, the accumulation of *T. vaginalis* increased sharply on the second day of the study, and their resistance to high concentrations of antimycotic (up to 20 μg/ml) was also observed. However, the viability of the cells was reduced in contrast to media with 10% horse serum and low concentrations of amphotericin B. The addition of enzymatic peptone to experimental media did not reveal a significant difference in the growth properties.

According to the results, an experimental medium containing 10% horse serum with amphotericin B in concentration 2 μg/ml was chosen for detection and accumulate *T. vaginalis*.

9.21 doi: 10.15789/2220-7619-2018-4-9.21

ANALYSIS OF THE PHAGE SENSITIVITY OF MICROORGANISMS OF A MICROBIOTA OF A VAGINA

I.S. Polishchuk, A.V. Aleshukina, I.S. Aleshukina, T.I. Tverdokhlebova

Rostov Research Institute of Microbiology and Parasitology, Rostov-on-Don, Russia

Recently in connection with growth of detection of antibiotic resistant cultures, for treatment of infectious diseases even more often recommend to use bacteriophages. Bacteriophages don't give side effects in comparison with antibiotics and work is specific on microorganisms and exist in different pharmaceutical forms: liquid, gel and tableted. The solution of a question of application of a phage has to be based on results of testing of activity of medicine.

The aim of the study was comparative analysis of two options of phagus medicines for definition of a phagus sensitive of microorganisms of a microbiota of a vagina.

50 women who have addressed to laboratory on an outpatient basis for the purpose of receiving a bacteriological research of a vaginal microbiota have been examined. Bacteriological researches were conducted according to the standard recommendations. For identification of species of bacteria by MALDI-TOF MS method used a desktop mass spectrometer of Microflex with the MALDI Biotyper library (Bruker Daltonics Germany). As the tested medicines applied polyvalent liquid and gel forms of bacteriophages. The modified technique where the bacteriophage was applied with a print on culture a bacteriological loop (cm d = 0.5) bent at an angle of 90° lehas been developed for a gel form of a bacteriophage. Assessment of lytic activity of a phage was carried out on a five-point scale (by quantity of "crosses").

The sensitivity to bacteriophages has been defined at 45 women with violation of a microbiota of V. At the same time the high sensitivity to a liquid form of a bacteriophage has been found in 6 patients (13%). To a gel form the high sensitivity has been defined at 39 patients (87%), coincidence cases on sensitivity at both bacteriophages weren't observed.

The parallel research of sensitivity of microflora to liquid and gel forms at a bacterial vaginosis has shown that in 87% microorganisms were sensitive to a gel form while the sensitivity to liquid bacteriophages has been found in 13% of the bacteria inhabiting the offered modification of a research of activity of bacteriophages on a gel basis allows to dose bacteriophages in this pharmaceutical form and to receive comparable results with a classical technique.

9.22 doi: 10.15789/2220-7619-2018-4-9.22

S. AUREUS/C. ALBICANS MONO- AND DUAL-SPECIES BIOFILMS

O.N. Postnikova, D.V. Chepurina

V.I. Vernadsky Crimean Federal University, Simferopol, Russia

Several studies have reported the co-isolation of *S. aureus* and *C. albicans* from numerous biofilm-associated diseases. These data indicate that these organisms have the capacity to interact with one another at the molecular level. The possibility of the development of polymicrobial biofilms, consisting of both fungi and bacteria, should be considered in pathogenesis of various infections.

The aim of our work was study of mono-and dual-species *S. aureus/C. albicans* biofilms, evaluation of distinctions between clinical and standard streins biofilms of both in static assays.

In the work used standard strains of *S. aureus* 25923 ATCC and *C. albicans* CCM 885, as well as clinical strains of them, isolated from patients with acute otitis media (*S. aureus* U14) and also from healthy carrier (*S. aureus* 609, *C. albicans* 609).

Overnight cultures was diluted 1:100 into fresh medium for biofilm assays. Static biofilm assays of O`Toole G. and Kolter R. (1998) in a 96 well dish was used. Biofilms were formed by adding both organisms 1:1 to either microtiter plates. The plate was then grown statically at 37°C overnight. The cultures removed with a multichannel pipette plate, the plate was rinsed 3–4 times with water, a 0.1% solution of crystal violet in water was added of to each well, incubated for 15 minutes at RT. Then 200 μL of 95% ethanol was added to each well and the plate was left to stand on the bench for 30 minutes. Finally the plate was read with a microplate reader Multiskan at 620 nm.

Biofilms density of *Staphylococcus* cultures was the highest in the clinical isolate *S. aureus* U14 (24% more