

CHLAMYDIA TRACHOMATIS AND HERPES SIMPLEX VIRUS CULTURE TECHNIQUE IN DIAGNOSIS: LABORATORY SERVICE AT ARMED FORCES RESEARCH INSTITUTE OF MEDICAL SCIENCES (AFRIMS)

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ABSTRACT

Genital infection due to *Chlamydia Trachomatis* is the most common bacterial sexually transmitted disease. *Chlamydia Trachomatis* is known to cause urethritis, epididymitis, proctitis, cervicitis, pelvic inflammatory diseases, infant pneumonia and conjunctivitis. The group of herpes viruses includes four members-the Epstein Barr virus, the cytomegalovirus, the varicella-zoster virus and the herpes simplex virus (HSV)-which are pathogenic for humans. A common characteristic of these viruses is their ability to cause persistent infection and to become latent. HSV consists of two distinct serovars, HSV1 and HSV2. HSV1 tends to cause oropharyngeal diseases and HSV2 is associated with genital diseases. Traditionally, Chlamydia and HSV infections have been diagnosed by the detection of Chlamydia inclusions and cytopathic effects of HSV in tissue culture, direct antigen detection technique, nucleic acid probes, ligase chain reaction and polymerase chain reaction. The sexually transmitted disease laboratory at AFRIMS, for the diagnosis of *Chlamydia Trachomatis* and HSV, remains using the cell culture technique. Fifty four clinical specimens, including urethral, endocervical and ocular swabs, obtained from Pramongkutkloa Hospital and other hospitals from January through December 2004 were performed for isolation of *Chlamydia Trachomatis*. Of those, 2 positive cultures were demonstrated (2/54). These specimens were shaken vigorously on a vortex mixer to release elementary bodies from intact host cells and inoculated in monolayer of McCoy cell. The plate was centrifuged at 2000g for 1 hour at 30°C. Then, growth medium supplemented with 2 µg/ml of cycloheximide and 0.6 mg/ml of glucose was added and incubated at 35°C for 72 hours. The monolayers were examined using Jones iodine staining to visualize the cytoplasmic inclusions under the inverted microscope. One clinical sample was performed for isolation of the Herpes simplex virus by cell culture and it was negative. This specimen was inoculated in the monolayer of a Vero cell and incubated 3-4 days to observe cytopathic effects.

Key words: *Chlamydia Trachomatis*, McCoy cell, Inclusion body, Vero cell, Cytopathic effects.