CHAPTER I

INTRODUCTION

Chlamydia are a group of obligate intracellular bacteria differentiated from other microorganisms by an unique developmental cycle (1,2,3). The genus chlamydia is divided into two species : Chlamydia trachomatis and C. psittaci (3). Fifteen serotypes of C. trachomatis have been identified : A, B, Ba and C which are trachoma serotypes ; D, E, F, G, H, I, J and K which are oculogenital serotypes; and L_1, L_2 and L_3 which are lymphogranuloma venereum serotypes (1,4)

C. trachomatis is a common sexually transmitted pathogen. In men it causes non-gonococcal urethritis and epididymitis. In sexually active women, cervical infections are common and acute salpingitis are also recovered (1,2,5,6). 28-70% of babies born through a chlamydia infected birth canal may become infected; 22-50% of exposed infants will develop conjunctivitis in 5 to 14 days of the life and 11-20% of exposed infants will develop pneumonitis within 3 to 4 months (7-12).

The clinical criteria for the diagnosis of chlamydial genital infection in women are unsatisfactory. It produces, in most instances, minimal symptoms, or mild symptoms, or the non-specific symptoms (9, 13-16), so that patients do not come to the attention of physicians. Moreover, without culture many infected women would remain unrecognised and untreated.

Since most laboratories do not have access to culturing for chlamydia, some had developed a micro-immunofluorescent test for serologic studies of antichlamydial antibodies (17-20). The test is

important in the epidemiological studying of C. trachomatis. It is, so far, the only test that have an accecptable specificity and sensitivity (21,22).

Research Aims

1. To determine the incidence of cervical infection with C. trachomatis in a group of pregnant women attending the antenatal clinic of Chulalongkorn Hospital by cell culture method using McCoy cells treated with cycloheximide.

2. To compare the relative frequencies of this infection in early and late gestation of pregnancy.

3. To identify particular genitourinary tract symptoms associated with chlamydial infections.

4. To describe any difference in the history of sexually transmitted diseases correlated with chlamydial infection.

5. To investigate the prevalence of chlamydial genital infection in pregnant women by detecting serum antichlamydial antibody using modified micro-immunofluorescence test.

6. To explore the relationship of serum antibody to chlamydial infection.

7. To determine MIC (minimal inhibitory concentration) of erythromycin, tetracycline and RU 28965 to C. trachomatis as erythromycin and tetracycline are the drugs of choice in management of genital chlamydial infection (5,23).

Research Advantages

1. To know the incidence of cervical infection of C. trachomatis in a group of women attending the antenatal clinic

of Chulalongkorn Hospital so the infants born from infected mothers should be cared.

2. To determine whether chlamydial culture in pregnant women is necessary or not. Since isolation of chlamydial are sophisticated and cost a lot.

3. To know the association of chlamydial infection with genitourinary tract symptoms and history of sexually transmitted disease.

4. To know the epidemiology of C. trachomatis infection in normal pregnant women.

5. To know whether erythromycin, tetracycline and RU 28965 are susceptible to C. trachomatis or not.