Letter to the Editor

A prevalence study of *Chlamydia* infections in Turkish population

Dear Editor,

The most common sexually transmitted disease (STD) is caused by *Chlamydia trachomatis*. Screening of different populations of women have shown prevalence rates of *C. trachomatis* of 1–25%.[1] *C. trachomatis* infections were associated with mucopurulent, cervicitis, endometritis, pelvic inflammatory disease (PID), salpingitis, postabortal pelvic sepsis and perihepatitis and long-term complications of PID, infertility and ectopic pregnancy.[2]

Several risk factors were reported to be associated with *C. trachomatis* infections such as: age, sex, family status, education, ethnic status, initial age of sexual activity, number of sexual partners, oral contraceptives, or an intrauterine device, smoking, drug addiction had been reported as risk factors of infections.[3]

The women who were admitted to Family Planning Department during the period from March 2003 to August 2004 were included in this study. In our study enrolment criteria were age older than 17 years; no previous history of gynecological operation. The patients who fulfilled the criteria were included in the study.

Prior to enrollment, in the study, an informed consent was obtained from the patients and the study was approved by local ethical committee. All the patients were face to face interviewed and cervical smears and swabs for Chlamydial DNA study were obtained from all cases. Data were expressed as mean standard deviation and SPSS statistical software package (SPSS, version 12 for Windows; SPSS Inc., Chicago, IL, USA) was used for statistical analyses.

The mean age of 1353 cases was 34.69 ± 8.16 years (ranging from 17 to 73 years). The overall Chlamydial-DNA positivity was 2.66% (36 cases) for *C. trachomatis*. Age, partner's age ($p = 0.38$), marriage duration ($p = 0.81$), frequency of sexual intercourse ($p = 0.26$), number of birth ($p = 0.36$), parity ($p = 0.51$), history of abortion ($p = 0.31$) and curettage ($p = 0.34$) revealed no statistically significant difference between the *Chlamydia* polymerase chain reaction (PCR) positive and negative groups (Table 1). Presence of pathologic vaginal discharge and vaginal

Table 1 – Risk factors for *Chlamydia* infections.

Risk factors	*Chlamydia* negative	*Chlamydia* positive	t	p
Age	34.72 ± 8.17	33.53 ± 7.93	0.86	0.389
Partner's age	38.73 ± 8.58	37.5 ± 8.27	0.82	0.41
Marriage duration	13.85 ± 8.33	13.5 ± 7.76	0.24	0.811
Intercourse frequency	7.17 ± 4.24	7.97 ± 5.32	-1.12	0.265
Gravida	2.86 ± 1.82	2.58 ± 1.86	0.92	0.359
Parity	2.02 ± 1.18	1.89 ± 1.26	0.66	0.512
Abortus	0.25 ± 0.64	0.36 ± 0.76	-1.02	0.31
Curettage	0.58 ± 1.05	0.42 ± 0.81	0.95	0.343

	Number of persons	Percent	Number of cases	Percent	
Number of marriages					
0	12	0.9	2	5.6	
1	1292	98.1	32	88.9	y^2: 14.20
2	13	1.0	2	5.6	$p = 0.001$
Number of partners					
0	25	1.9		0.0	
1	1288	97.8	36	100.0	x^2: 0.81
2	4	0.3		0.0	$p = 0.667$

pH were not statistically associated with Chlamydial positivity.

The rate of *Chlamydia* DNA positivity was 2.6% in our study which was relatively low compared to the Turkish data.[4] Studies from different geographic regions of world reported different ratios such as ranging from 0.8 to 14%.[5] In addition to age, different from the literature, the partner's age, marriage duration, frequency of sexual intercourse, contraception method use, occupation of the cases and their partners together with the educational levels of cases, number of gravida, parity, abortion and curettage of the cases revealed no statistically significant difference between the *Chlamydia* positive and negative groups.

In conclusion, in our study *Chlamydia* prevalence of Turkish population was found to be similar to other countries.

Regarding its high risk of developing sequela; effective screening programmes for *Chlamydia* infections and their long term adverse effects such as PID; ectopic pregnancy, infertility are essential.

Conflict of interest

The authors have no conflict of interest to declare.

REFERENCES

1. Golden N, Hammerschlag M, Neuhoff S, et al. Prevalence of *Chlamydia trachomatis* cervical infection in female adolescents. Am J Dis Child. 1984;138:562–4.
2. Peipert JF. Clinical practice. Genital chlamydial infections. N Engl J Med. 2003;349:2424–30.
3. Menéndez C, Castellsagué X, Renom M, et al. Prevalence and risk factors of sexually transmitted infections and cervical neoplasia in women from a rural area of southern Mozambique. Infect Dis Obstet Gynecol. 2010;2010, http://dx.doi.org/10.1155/2010/609315, pii: 609315 [Epub 2010 Jul 11].
4. Ozdağ D, Us D, Demirezen S, Beksaç S. Investigation of *Chlamydia trachomatis* positivity in women with and without gynecologic complaints by cytologic and direct immunofluorescence methods. Mikrobiyol Bul. 2007;41: 51–61.
5. Van Der Pol B, Quinn TC, Gaydos CA, et al. Multicenter evaluation of the Amplicor and automated Cobas Amplicor CT/NG tests for the detection of *Chlamydia trachomatis*. J Clin Microbiol. 2000;38:1105–12.

Şükran Köse, Gürsel Ersan, Süheya Serin Sender
Department of Infectious Diseases and Clinic Microbiology Tepecik, Training and Research Hospital, Turkey

İlker Devrim [a,*], Mehmet Murat İnal [b]
[a] *Department of Pediatric Infectious Diseases, Dr. Behcet Uz Children's Training Research Hospital, Ministry of Health, Turkey*
[b] *Aegean Obstetrics and Gynecology Teaching Hospital, Izmir, Turkey*

[*] *Corresponding author at*: Department of Pediatric Infectious Disease, Dr. Behçet Uz Children's Hospital, Alsancak, Konak, Izmir, Turkey. Tel.: +90 5063090707.
E-mail address: ilkerdevrim2003@yahoo.com (İ. Devrim).