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Prevalence of *Chlamydia trachomatis* infection among women attending infertility clinic by PCR and ELISA in Rwanda

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Background: *Chlamydia trachomatis* is an obligate intracellular bacterium recognized as one of the major causes of sexually transmissible human bacterial infection throughout the world. Since most infected individuals are either asymptomatic or have mild, nonspecific symptoms, *C. trachomatis* infection poses a problem for health control programs. In contrast to industrialized countries, little is known about the prevalence of genital *C. trachomatis* infections in resource-poor countries including Rwanda. The objective of this study was to determine the prevalence of *C. trachomatis* in women attending an infertility clinic in Rwanda.

Methods: Serum and vaginal swab specimens of 303 women presenting with infertility to the infertility clinic of the Kigali University Teaching Hospital, and 312 fertile controls who recently delivered were investigated. Two commercial species-specific enzyme-linked immunosorbent assays (ELISA) were used to determine serum IgG and IgA antibodies to *C. trachomatis* and vaginal swabs specimens were tested by PCR.

Results: The rates of *C. Trachomatis* infection as detected by PCR did not differ significantly between fertile and infertile group (10/308, 3.8%;12/312, 3.3% respectively; p = 0.5). The patients with *C. trachomatis* infection were more likely to be aged 21-25 years (P = 0,012) and to have pruritis. (p = 0.05). The prevalence of *C. trachomatis* infection was higher in the women with vaginal discharge (9.1%) compared to women with other symptoms (3.3%), but this did not reach statistically significance (p = 0.08). The overall prevalence of IgG antibodies was 18.8% and 18.3: 18.5% (18.8% in fertile women versus 18.3% in control) with ANILabsystems and 18.7% (17.3% versus 19.9%) with Vircell.

Conclusion: To the best of our knowledge, this is one of the first reports on the prevalence of Chlamydia infection in women from Rwanda, East Africa. The prevalence of *C. trachomatis* in our study population in Rwanda appears to be low as demonstrated by molecular and serological markers. Women aged less than 25 years are more likely to have genital infection with *C. trachomatis*.

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Risk of sexually transmitted infections due to changing sexual attitude and behaviors and limited knowledge among college students in southern China

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Background: The incidence of Sexually Transmitted Infections (STIs) has increased significantly in China in recent years, partly due to changing sexual attitude and behaviors among young Chinese. Guangdong is one of the provinces with the highest morbidity from STI. Nonetheless, only a limited number of related studies have been done. The aim of the study was to examine risk of STI in college students in Guangdong from their STI knowledge and self-reported sexual attitude and behaviors.

Methods: A cross-sectional study using a 28-item web-based anonymous questionnaire was carried out with students attending the Shantou University, Guangdong, in 2011. The questionnaire, which was designed based on information available on the US CDC and WHO websites, assessed sexual attitude, behavior, and STI knowledge (including definition, symptoms, complications, pathogens, transmission, high-risk action, and learning sources). Data from the completed questionnaires collected over two weeks were analyzed by chi square method and adjusted logistic regression analysis.

Results: Of 1030 college students taken part in the survey, 80% were 20-25years old, 76% considered pre-marital sex acceptable, and 21% had sexual experience. Students knew little about common STIs, symptoms, and complications. Most of them had misconceptions about transmission and prevention of STI. There was no significant difference in gender, age, or major concerning their reported sexual practice. Internet was the major information resource for 76% of students.

Conclusion: These students would appear to be at risk of STI due to their liberal attitude towards sex, engagement in unsafe sex, and limited STI knowledge. Without targeted educational measures, STI incidence in the university students could increase in near future. Online education and counseling via Chinese websites and social media, where safe sex and STI related information could be provided by health experts, may be one of practical solution to reduce STI risk in university students.

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