

Prevalence and Correlated Factors of Sexually Transmitted Diseases—Chlamydia, *Neisseria*, Cytomegalovirus—in Female Rape Victims

Sion Jo, MD,* Jonghwan Shin, MD,* Kyoung Jun Song, MD,* Jin Joo Kim, MD,† Kyu Ri Hwang, MD,‡ and Hasan Bhally, MD§

*Department of Emergency Medicine, Seoul Metropolitan Government Seoul National University Boramae Medical Center, Seoul National University Hospital, Seoul, Korea; †Department of Emergency Medicine, Gachon University Gill Hospital, Incheon, Korea; ‡Department of Obstetrics and Gynecology, Seoul Metropolitan Government Seoul National University Boramae Medical Center, Seoul National University Hospital, Seoul, Korea; §Medicine of Infectious Disease, Northshore Hospital, Northshore City, New Zealand

DOI: 10.1111/j.1743-6109.2010.02069.x

ABSTRACT

Introduction. Prevalence of sexually transmitted infections (STIs) was not well known in female rape victims.

Aim. To assess the prevalence and correlated factors of STIs—especially *Chlamydia trachomatis* (CT), *Neisseria gonorrhoea* (NG), and cytomegalovirus (CMV) in female rape victims presenting to a dedicated regional referral center in South Korea after settle down of intergrated service center for sexual abuse in study hospital.

Main Outcome Measures. Positive polymerase chain reaction (PCR) result for CT, NG, and CMV.

Methods. A retrospective observational analysis was conducted from December 2008 to February 2010. All females, regardless of age and previous sexual history, who were victims of rape, and self presented or referred to the regional center for medical care and counselling were included. Relevant diagnostic tests for STIs—including PCR by cervical swab—were performed. Analysis for virgin (VIR) and nonvirgin (non-VIR) groups was done separately to compare certain clinical characteristics.

Results. A total of 316 females were included. Overall STI prevalence was 32.91%; CT in a majority (28.85%) followed by NG (6.27%), CMV(1.37%). In VIR group, prevalence of STI was 26.67%; 20.00% in CT, 4.55% in GN, 2.33% in CMV. A small and non-significant difference in STI was noted in VIR and non-VIR groups (26.67% vs. 34.26%, respectively). STI prevalence was higher in young women 20 to 24 years of age and girls 15 to 19 years of age compared with other age groups. Age (odds ratio [OR]: 0.909, confidence interval [CI]: 0.851–0.971) and pyuria (OR: 3.454, CI: 1.567–7.614) were determined as significant correlated factors after multivariate regression analysis.

Conclusions. Prevalence of CT and GN in female rape victims was introduced and it was higher than that in the general population. Even in the VIR group, it was high. CMV prevalence in the female genital tract was reported firstly.

Jo S, Shin J, Song KJ, Kim JJ, Hwang KR, and Bhally H. Prevalence and correlated factors of sexually transmitted diseases—chlamydia, *Neisseria*, cytomegalovirus—in raped female victims. J Sex Med 2011;8:2317–2326.

Key Words. Sexually Transmitted Disease; Prevalence; Raped Victims; Sexual Abuse

Introduction

Sexually transmitted infection (STI) is a major public health problem. The Centers for Disease Control and Prevention (CDC) reported 16 million new STI infections in their latest updated surveillance report [1] and the cost of

STIs to the U.S. health care system is estimated to be as much as \$15.9 billion annually [2]. Among STIs, chlamydia and gonorrhea are the two most common STIs in the United States; there were 1.5 million reported cases in 2008. However, these infections have few recognizable symptoms in many cases, so there are many obstacles to

diagnosing and treating them [1]. In the case of chlamydia, although the CDC recommended annual screening for all sexually active women 26 years of age and under [3], the National Chlamydia Coalition assumed that the screening rate for chlamydia is only about 40%, and the CDC estimated there were 2.8 million chlamydia infection cases in the United States in 2008. Gonococcal infections are also substantially under-diagnosed and the CDC estimated there were twice as many as reported cases. Nowadays, the prevalence ratio of chlamydia infection to neisseria infection is about 4:1 [3]. Another STI—cytomegalovirus (CMV)—has long been known to be transmitted sexually [4–8]; however, its prevalence is not yet known.

Sexual abuse, especially rape, is a dreadful incident in a victim's life; sexually abused victims need medical, emotional, and psychological support, even legal support [9], and the American Academy of Pediatrics, American College of Obstetrics and Gynecology, American College of Emergency Physicians, and the CDC recommend appropriate treatment of rape victims [10–13]. In 2008, Seoul Metropolitan Government, Seoul Metropolitan Police Agency and BORAMAE Medical Center established a “One Stop Service” in Seoul National University Hospital to offer free medical assistance, counselling, and legal advice to various female victims of violence including sexual abuse. This center predominantly serves southern and western parts of Seoul—with an estimated population of 1.5 million. Since then, victims of violence including sexual abuses were supported by “One Stop Service,” and we had a chance to manage sexually abused, especially raped, victims more comprehensively than previously.

The purpose of this study is to determine the prevalence of STI—*Chlamydia trachomatis* (CT), *Neisseria gonorrhoeae* (NG), CMV—in female rape victims, and to assess correlated factors with STI infection among them.

Materials and Methods

This study was approved by the Institutional Review Board of BORAMAE Medical Center. Approval number is 06-2010-36.

Study Design

A retrospective observational analysis was conducted. This study was conducted at a coordinative center for sexual abuse—named “One Stop Service” mentioned previously, which was estab-

lished in a tertiary hospital. This “One Stop Service” center serves the western and southern part of Seoul and the adjacent area in Gyeonggi Province, where approximately 1.5 million people live. Medical costs for sexually abused victims were paid for by the Seoul Metropolitan Government. Clinical follow-up at two weeks or earlier was attempted in the outpatient obstetrics and gynecologic unit for all victims.

Selection of Population

All female rape victims, regardless of age or time of occurrence, attending the center between December 2008 and February 2010 were considered eligible. Rape was defined as non-consensual sexual intercourse resulting in penile penetration of the vulva.

Clinical Data Collection

Clinical demographic data were collected from a Utstein style registry [14]. Age, gender, co-morbidities, and initial vital signs at the Emergency Department were collected. Victims were asked for the following information: past medical or OBGYN history, menstrual cycle, menstrual duration, last menstrual period, previous coitus date, contraception method, where rape occurred, whether alcohol ingestion was related, whether abuser ejaculated, where ejaculation was, and whether abuser used condom. Menstrual cycle was classified according to menstrual cycle length. Menstrual cycle length disorders included the following: polymenorrhea, oligomenorrhea, amenorrhea, and irregular menstruation. Polymenorrhea was defined as menstrual cycles with intervals of 21 days or fewer. Oligomenorrhea was defined as menstrual cycles with intervals of 35 days or more. Irregular menstruation was defined as variations of more than 8 days in menstrual cycle length. In case where victims perceive that their menstrual cycle is just irregular, it was included in the irregular menstruation category. Menorrhagia was defined as menstruation that lasted longer than 7 days in this study. In the questionnaire, we did not include the question about how many sex partners the victim had, considering that question might ill affect the victim emotionally and psychologically.

Laboratory Data Collection

Laboratory testing in all the victims included complete blood count, electrolytes, creatinine, liver enzymes, urinalysis with microscopy, and culture of a sterile mid stream urine specimen and urine

Download English Version:

<https://daneshyari.com/en/article/4271470>

Download Persian Version:

<https://daneshyari.com/article/4271470>

[Daneshyari.com](https://daneshyari.com)