Reproductive Tract Infections in Tribal Women of Central India

Vikas Rao, Deepali Savargaonkar, Anup Anvikar, Manoj K. Bhondeley, B.K. Tiwary, Mahendra Ukey, Alpana Abbad, Shraddha Srivastava

Abstract

The objective of the present study was to know the prevalence of reproductive tract infections in tribal women of Madhya Pradesh state in central India. This population based cross sectional study was conducted in tribal villages of Madhya Pradesh. Women having symptom/s of RTI were clinically examined for the presence of RTI. Appropriate specimens were collected and processed for different pathogens like Gardnerella vaginalis, Neisseria gonorrheae, Trichomonas vaginalis, Candida sp, Chlamydia, HSV-2, HBV, and HIV. Of the 2206 women studied, 172 had symptomatic reproductive tract infections giving a community prevalence of 7.8%. Bacterial vaginosis was the commonest RTI, followed by trichomoniasis, gonorrhea and candidiasis. The study highlights a need to strengthen the RTI/STI control programme particularly in tribal areas.

Introduction

Sexually transmitted infections continue to present a major health, social and economic problem in the developing world (Thakor et al, 2004). There is a dearth of information regarding the epidemiology of RTI in India for many reasons (Desai et al, 2003). The situation may still be worse in tribal areas, where there is hardly any access to the health delivery system due to difficult terrain. Hence a study was performed to know the prevalence of RTI in tribal women of central India.

Material and Methods

The study was conducted in tribal villages of Jabalpur district. Ten villages having more than 90% tribal population were randomly selected. The sample size of 2100 was estimated for coverage. Married women aged 15 to 49 years were included in the study. Informed consent was obtained from all participating women. Demographic data pertaining to each participating woman was collected on an individual card in a pre-coded form. Women having symptom/s suggesting RTI were clinically examined by trained lady medical officer. Symptoms like vaginal discharge, burning micturition, increased frequency of micturition, itching, painful intercourse, pain in the lower abdomen, etc were recorded. Pretest counselling was given before collecting the blood samples for HIV testing.

Vaginal swabs were collected and examined for the presence of *Trichomonas vaginalis*, and yeast cells. In addition, Gram stained smears were examined for clue cells. Endocervical swabs were collected for identification of *N. gonorrheae* and Chlamydia. Blood samples were collected from randomly selected 440 (20%) women (symptomatic as well as asymptomatic) and sera subjected to serologic tests for HIV, HBV, HSV2 (ELISA) and syphilis (TPHA). Pretest counseling for HIV/AIDS was given by trained lady counselor before drawing blood. Appropriate treatment was given to those having RTIs after collection of specimens. Treatment was also given to male partner.

Results

A total of 2206 women from ten tribal villages were screened for the presence of various STDs. Their mean age was 30.7 years. Majority (72%) of the women were illiterate, while about 20% had received primary education. More than 75% women got married before the age of 18 years. A total of 172 women (7.8%) had at least one complaint suggesting RTI.

The prevalence of symptoms pertaining to reproductive tract is given in Table 1. The commonest complaint was vaginal discharge, followed by itching, dysmenorrhea, menorrhagia, irregular periods, burning micturition and dyspareunia. One hundred and seventy two women had at least one symptom suggesting RTI giving a community prevalence of 7.8%.

Table 1. Symptoms related to reproductive tract (n=172)

Sr. No.	Symptom	No. (%)
1	Dysmenorrhea	34 (10.7)
2	Menorrhagia	29 (9.1)
3	Irregular periods	27 (8.5)
4	Vaginal discharge	107 (33.8)
5	Itching	53 (16.7)
6	Dyspareunia	7 (2.2)
7	Burning micturition	31 (9.8)
8	Pain in lower abdomen	29 (9.1)
	Total	317

Laboratory confirmation of RTI could be done in 143 women. Bacterial vaginosis was the commonest RTI and was seen in 69 (3.1%) women. Among the other common RTIs were trichomoniasis in 41 (1.9%), gonorrhea in 16 (0.7%) and candidiasis in 13 (0.6%) (Table 2).

Table 2. Prevalence of RTI as evidenced by laboratory results (n = 143)

Sr. No.	STD	No. (%)
1.	Gonorrhea	16 (0.7)
2.	Bacterial Vaginosis	69 (3.1)
3.	Trichomonasis	41 (1.9)
4.	Candidiasis	13 (0.6)
5.	Chlamydia	6 (0.3)
6.	Syphilis	2 (0.1)

Discussion

The combined burden of various RTIs is overwhelming. Though the target organ for all these infections is reproductive tract, RTIs have an ill effect on health as a whole. Our study showed an RTI prevalence of 7.8% in tribal women. This may be attributed to poor health delivery system in tribal areas so also reluctance to seek medical care. A community prevalence of 8.3% was observed in a community based study conducted in Tamil Nadu (Thomas et al, 2002).

Bacterial vaginosis is a common cause of vaginitis in women who are sexually active during childbearing age. pH changes and change in normal vaginal flora allow organisms like *Gardnerella vaginalis*, Peptostreptococci, anaerobic gram negative bacilli, *Mobiluncus* and Mycoplasma *hominis* to overgrow and cause chronic infection and discharge (Rao et al, 2004). Not surprisingly, bacterial vaginosis was the commonest RTI in the present study.

The study showed a high prevalence of RTIs like Trichomoniasis, Gonorrhea and Chlamydia infection. These infections are known to also cause pelvic inflammatory disease, infertility and maternal as well as neonatal morbidity (Sullivan et al, 2004).

In fact, a random sample consisting of symptomatic as well as asymptomatic women was drawn for studying these markers. However, it can not be claimed that the infection was via sexual route. The study area is a low prevalence area as far as HIV infection is concerned (NACO, 1998). The finding is substantiated by the fact that no HIV infection was found in the random sample. The study highlights a need to strengthen the RTI/STI control program particularly in the tribal areas.

References

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