

Prevalence of Reproductive Tract Infection (RTI) Amongst Reproductive Age Women in Rural Area: A Missed Opportunity

Mudra Mehta¹, Sonal Parikh², D. V. Bala³

¹ Resident, ² Associate Professor, ³ Professor & Head, Community Medicine Department, Smt. N. H. L. Municipal Medical College, Ahmedabad

Correspondence : Dr. Mudra Mehta, E-Mail: mudramehta1111@gmail.com

Abstract:

Introduction : Reproductive Tract Infection (RTI) among women often go undiagnosed and have remained as an unmet need. Such problems never get treated unless it is asked as a leading question by the health workers. An untreated RTI leads to pelvic inflammatory disease, ectopic pregnancy, miscarriage, cervical cancer and an increased risk of Human Immunodeficiency Virus (HIV) transmission. **Objectives :** (1) To study the prevalence of RTI amongst reproductive age women in rural area (2) To study the proportion of RTI symptoms amongst women attending Out Patient Department (OPD) for the reason other than the complaints of RTI. **Method :** A house to house survey was conducted to find out prevalence of RTI in reproductive age women by semi-structured questionnaire in Singarava village. Women attending Community Health Centre (CHC) OPD were also surveyed about RTI symptoms and attending OPD for the reason other than this complaint was considered as a missed opportunity. **Results :** White discharge and peri-vulval itching were the most common complaints. In this study, prevalence of RTI (at least one symptom of RTI) was 70% in community and proportion of RTI (at least one symptom of RTI) was 67% in women attending OPD. These women were attending OPD for other complaints like fever or Upper Respiratory Tract Infection (URTI). Significant correlation was found between parity and RTI symptoms. As this was an unmet need, neither the woman nor her husband had undergone any treatment for the same. **Conclusion :** Very high prevalence of RTI symptoms was seen in the community.

Key words : RTI, Rural area, Unmet Need, Missed Opportunity

Introduction :

According to World Health Organization (WHO) estimate, around 340 million new cases of curable sexually transmitted infections (STIs) occur every year. The figure does not include HIV or other viral STIs like Hepatitis B, genital herpes, and genital warts, which are not curable. The most common of the curable STIs are Gonorrhoea, Syphilis, Chlamydia, and Trichomoniasis. STIs constitute a significant health burden and increase the risks of transmission of HIV. ^[1] Reproductive tract infection (RTI) is a global health problem among women, living in South East Asian Region (SEAR) countries. Studies have found the prevalence of RTI in India, Bangladesh, Egypt, and Kenya is in the range of 52–90 per cent. More than a million women and infants die of the complications of RTI every year. ^[2] RTIs are caused by organisms normally present in the reproductive tract or introduced from the outside during sexual contact or

medical procedures. These different but overlapping categories of RTI are called endogenous, STIs and iatrogenic, reflecting how they are acquired and spread. ^[3] The social stigma usually associated with STIs may result in people seeking care from alternative providers or not seeking care at all. The prevalence of self-reported RTI symptoms among Indian women has been found to be 11% - 18% in nationally representative studies ^[4, 5] and 40% - 57% in various other studies ^[6-8], while the prevalence of laboratory-diagnosed RTIs has ranged from 28% to 38%. ^[9, 10] According to studies that have explored women's patterns of seeking treatment for RTI symptoms, between one-third and two-thirds of symptomatic women did not seek treatment ^[6, 8-10]. RTIs being serious diseases in their own right, they enhance sexual transmission of HIV infection. The presence of untreated STIs/ RTIs can increase the risk of both acquisition & transmission of HIV by a factor of up to 10. ^[11]

Objectives :

- 1) To study the prevalence of RTI amongst women of reproductive age group in rural area
- 2) To study the proportion of RTI symptoms amongst women attending OPD for the reason other than the complaint of RTI

Method :

- Study design: Cross Sectional Study
- Period of Study: October 2014
- Sample size: 150 women of reproductive age group
- Data Collection: House to house survey in 50 reproductive age women in Singarva village, 100 women attending Singarva CHC OPD

Inclusion criteria :

- For community based study: Those who were present at the time of House visit and give verbal consent.
- For hospital based study: Those who were came to OPD during data collection

A house-to-house survey was carried out to find out prevalence of RTI in 50 reproductive age women by semi-structured questionnaire in Singarava village. Besides this, 100 women who attended CHC OPD were also asked about RTI symptoms. Women attending OPD for the reason other than this complaint were considered as missed opportunity. Efforts had been made for counseling of the women who were having any RTI symptoms, for their treatment and Medical Officer (MO) and Health worker were also informed about their symptoms and assurance was given by MO for further management.

We have considered white discharge, perivulvul itching, lower abdominal pain and ulcer as prevalent RTI symptoms.

Results :

House to House study Results:

- 74% (37) women belong to the age group of < 30 years of age, followed by the age group of > 30 years (26%, 13).
- 18% (9) of women were unmarried and 82% (41) were married. Average age of the women was 26.56 years, average years of Active Married Life were 6.02 years and average gap between last two successive births was 1.02 year.
- 70% (35) of women were having at least one RTI symptoms. 68% (34) of women were having complaint of white discharge, 54% (27) were having complaint of perivulvul itching and 12% (6) were having complaint of abdominal pain.

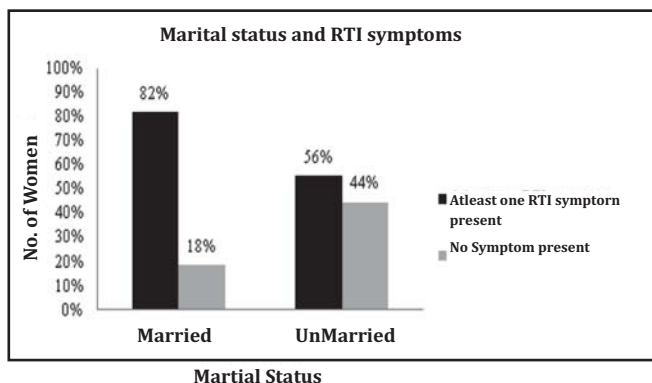
Centre based study :

- 75% (75) women belong to the age group of < 30 years of age followed by the age group of >30 years (25%, 25).
- 27% (27) of women were unmarried and 73% (73) were married. Average age of the women was 26.07 years, average years of Active Married Life were 5.08 years and average gap between last two successive births was 1 year.
- 67% (67) of women were having at least one RTI symptoms. This indicates that an opportunity to diagnose any symptoms of RTI condition has been missed.
- 64% (64) of women were having complaint of white discharge, 25% (25) were having complaint of perivulvul itching and 15% (15) were having complaint of abdominal pain.

Combined Results :

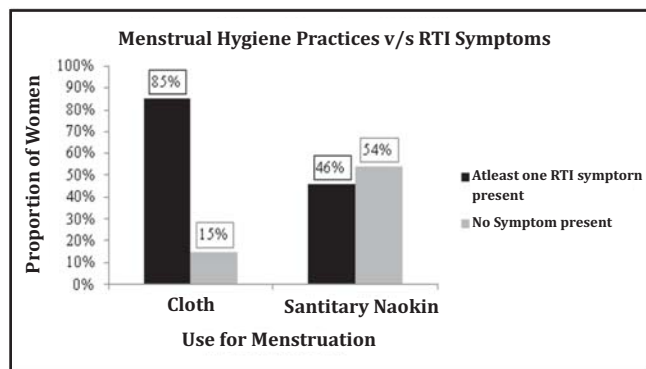
Out of total 150 women, 76% (114) were married and 24% (36) were unmarried. 25% (37) were using sanitary napkin and 75% (113) were using cloth. 8% (12) women had undergone treatment for the same in the past. As this was an unfelt need, none of the husband had undergone any treatment for the same. 4% (6) had history of MTP. All married women had single sexual partner and all unmarried women had not sexual exposure.

Figure 1: Marital Status and RTI Symptom (N=150)



As observed in figure 1, Out of 114 married women, 82% (93) women had at least one RTI symptom and 18%(21) women had no RTI symptom. Out of 36 unmarried women, 56%(20) women had at least one RTI symptom and 44%(16) women had no RTI symptom. At 95% confidence limit proportion of women having at least one RTI symptom was significantly higher in married women compared to unmarried women with p-value of 0.007 (<0.05).

Figure 2: Menstrual Hygiene Practices and RTI Symptoms (N=150)



As observed in figure 2, out of 113 women using cloth, 85%(96) women had at least one RTI symptom and 15%(17) women had no RTI symptom. Out of 37 women using sanitary napkin, 46% (17) women had at least one RTI symptom and 54%(20) had no RTI symptom. At 95% confidence limit proportion of women having at least one RTI symptom was significantly higher in married women compared to unmarried women with p-value of 0.001 (<0.05).

Table 1: Parity wise Proportion of Married Women and Prevalence of RTI Symptoms

Parity (n)	Married Women		Married Women having at least One RTI symptom	
	No	%	No	% of Married Women with 'n' parity
0	21	18%	15	71%
1	43	38%	36	84%
2	37	32%	32	86%
3	9	8%	8	89%
4	4	4%	4	100%
Total	114		95	

Table 1 shows parity wise proportion of married women surveyed with prevalence of RTI symptoms. 88% (101) of women out of 114 married women were pregnant for 2 or less number of times (irrespective of its results). Only 12% (13) of married women were pregnant for more than 2 times. (Irrespective of its results)As Shown in the table, 71% (15) of married women having zero parity had at least one RTI symptom. 86% (32) of married women with two parity had at least one RTI symptom. 100% (4) of married women having with parity had at least one RTI symptom. At 95% confidence limit, proportion of women having at least one RTI symptom was significantly higher in married women having more parity compared to women with less parity with p-value of 0.001 (<0.05).

Discussion :

In this study the prevalence of RTI/STI symptoms was found to be 70% in house to house study and proportion was 67% in center based study. Such high proportion of RTI/ STI symptoms in Centre Based Study shows that an opportunity to diagnose the RTI Condition has been missed amongst those who visited the CHC.

In a study conducted by Kosambiya et al. in Surat, the prevalence of RTI/STIs was in urban (69%) and in rural area (53%).^[12] White discharge was the most common reported symptom followed by peri-vulvul itching and then lower abdominal pain. In a study conducted by Anjana Verma et al. in New Delhi, vaginal discharge (77%) was reported as the most common symptom by the rural women, followed by lower backache (51%) and lower

abdominal pain (26%).^[13] Our study revealed that overall prevalence of RTIs was maximum (89%) in women who were having Three or more children and minimum (71%) in women who had one or no child. This difference was statistically significant (P value = 0.001). Though prevalence of RTI symptom in multiparous women (>3 children) is very high in our study due to small sample size, this finding is comparable to a study done by Rani et al., in Gorakhpur, which revealed that overall prevalence of RTIs was maximum (42%) in women who were having five or more children and minimum (34%) in women who had one or no child.^[14] Similar finding was reported in a study done in Ludhiana by Philip et al. in which it was found that the prevalence of the symptoms increased with parity, with the prevalence being lowest (8%) in the nulliparous and highest (25%) in the multiparous with parity >4. The prevalence was 17% in those with parity 1-2 and 18% in those with parity 3-4.^[15]

All married women had single sexual partner and all unmarried women had not sexual exposure. Although married women gave history that they had only one sexual partner and unmarried women that they had no sexual exposure, but it is highly subjective. We had asked about history of condom use but women were very reluctant to answer this question so we have not included this information in the study.

Conclusion :

Prevalence of RTI was 70% in the Community. Proportion of RTI was 67% in the Centre based study which was considered as missed opportunity. Proportion of women having at least one RTI symptom was significantly higher in married women compared to unmarried women. Proportion of women having at least one RTI symptom was significantly higher in women using cloth compared to sanitary napkin.

It is recommended whenever the woman attends the OPD she should be asked about RTI symptoms irrespective of complaint for which she had visited the healthcare centre and prompt treatment should be provided. Health worker should be advised to spread awareness in the community for different RTI symptoms, their treatment and using of sanitary napkins. The availability of the RTI/STI

treatment kits should be ensured in all the government healthcare centers.

Declarations :

Funding : Nil

Conflict of interest : Nil

References :

1. UNFPA, Top Level Push to Tackle Priorities in Sexual and Reproductive Health, United Nations Population Fund, New York, NY, USA, 2006.
2. UNFPA, Common Reproductive Tract Infections, No. 9, 1999.
3. WHO, Sexually Transmitted and Other Reproductive Tract Infections: Integrating STI/RTI Care for Reproductive Health, 2005.
4. International Institute for Population Sciences (IIPS), District Level Household and Facility Survey (DLHS-3), 2007-08, IIPS, Mumbai, India, 2010.
5. IIPS and Macro International, National Family Health Survey (NFHS-3), 2005-06: India, vol. 1, IIPS, Mumbai, India, 2007.
6. M. N. Bhandari and S. Kannan, "Untreated reproductive morbidities among ever married women of slums of Rajkot City, Gujarat: the role of class, distance, provider attitudes, and perceived quality of care," *Journal of Urban Health*, vol. 87, no. 2, pp. 254-263, 2010.
7. S. Sudha, S. Morrison, and L. Zhu, "Violence against women, symptom reporting, and treatment for reproductive tract infections in Kerala State, Southern India," *Health Care for Women International*, vol. 28, no. 3, pp. 268-284, 2007.
8. M. Rani and S. Bonu, "Rural Indian women's care-seeking behavior and choice of provider for gynecological symptoms," *Studies in Family Planning*, vol. 34, no. 3, pp. 173-185, 2003.
9. J. H. Prasad, S. Abraham, K. M. Kurz et al., "Reproductive tract infections among young married women in Tamil Nadu, India," *International Family Planning Perspectives*, vol. 31, no. 2, pp. 73-82, 2005.
10. V. Patel, H. A. Weiss, D. Mabey et al., "The burden and determinants of reproductive tract infections in India: a population based study of women in Goa, India," *Sexually Transmitted Infections*, vol. 82, no. 3, pp. 243-249, 2006.
11. Gilson L, Mkanje R, Grosskurth H, Mosha F, et al. Cost-effectiveness of improved treatment services for sexually transmitted diseases in preventing HIV-1 infection in Mwanza Region, Tanzania. *Lancet* 1997; 350:1805-09.
12. J. K. Kosambiya, V. K. Desai, P. Bhardwaj, and T. Chakraborty, "RTI/STI prevalence among urban and rural women of Surat: a community-based study," *Indian Journal of Sexually Transmitted Diseases & AIDS*, vol. 30, no. 2, pp. 89-93, 2009.
13. Anjana Verma, Jitendra Kumar Meena, and Bratati Banerjee, "A Comparative Study of Prevalence of RTI/STI Symptoms and Treatment Seeking Behaviour among the Married Women in Urban and Rural Areas of Delhi," *International Journal of Reproductive Medicine*, vol. 2015, Article ID 563031, 8 pages, 2015. doi:10.1155/2015/563031
14. V. Rani, S. Seth, P. Jian, C. M. Singh, S. Kumar, and N. P. Singh, "Prevalence of reproductive tract infections in married women in association with their past reproductive behaviour in district Gorakhpur," *Indian Journal of Preventive & Social Medicine*, vol. 40, no. 3, pp. 199-202, 2009.
15. P. S. Philip, A. I. Benjamin, and P. Sengupta, "Prevalence of symptoms suggestive of reproductive tract infections/sexually transmitted infections in women in an urban area of Ludhiana," *Indian Journal of Sexually Transmitted Diseases*, vol. 34, no. 2, pp. 83-88, 2013.