

Prevalence of reproductive tract infection symptoms and treatment-seeking behavior among women: A community-based study

Deepak Sharma, Naveen Krishan Goel, Meenal Madhukar Thakare
Department of Community Medicine, Government Medical College and Hospital, Chandigarh, India

Address for correspondence:

Dr. Deepak Sharma, Department of Community Medicine, Government Medical College and Hospital, Chandigarh, India.
E-mail: drdeepakpgimer@gmail.com

Abstract

Introduction: Reproductive tract infection (RTI) is a public health problem affecting women's health, especially in developing country like India. The associated stigma with this reproductive morbidity is often a deterrent in seeking health care. **Aims and Objectives:** The aim was to study the prevalence of RTI symptoms and treatment-seeking behavior among married women of reproductive age group. **Methodology:** It was a community-based cross-sectional study. A total of 276 women were interviewed in the community by trained medical social workers. RTI symptoms were defined according to the syndromic case management guideline developed by the World Health Organization. Statistical analysis was performed using the Epi Info software for Windows (CDC Atlanta). **Results:** About one-third (98/276; 35.5%) of women reported symptoms suggestive of RTI. The most commonly experienced symptoms were foul-smelling vaginal discharge (68/98; 69.4%) followed by lower abdominal pain not associated with menstruation (51/98; 52.0%). Around half of those having RTI symptoms sought treatment for their problem (57.1%). **Conclusion:** Health-care professionals in India should focus on strengthening women knowledge of RTI symptoms and encouraging them to seek health care.

Key words: Reproductive tract infection, syndromic case management, treatment-seeking behavior

INTRODUCTION

Reproductive tract infection (RTI) is a public health problem in developing countries. It is estimated that every day nearly one million people globally acquire a new RTI. Untreated RTIs in women often lead to infertility and increase the risks of transmission of human immunodeficiency virus (HIV) infection. Foul-smelling vaginal discharge along with lower abdominal pain is an important cause of health-care visits among women.^[1]

The World Health Organization (WHO) recommends syndromic approach for the management of RTIs.

In this approach, the diagnosis is based on the identification of group of symptoms and signs associated with infection. Sociodemographic factors along with behavioral practices influence the dynamics of RTI health-seeking behavior.^[2] The prevalence of RTI symptoms among women has been found to be ranging from 17% to 44% in national and international studies.^[3-5] Studies have explored the woman's pattern of seeking health care for their RTI symptoms and have reported that few of them seek treatment from health-care professionals.^[6,7]

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Despite being a serious public health issue, studies on the prevalence of RTI symptoms coupled with treatment-seeking behavior are limited. Thus, the present study was conducted with an aim of studying the prevalence of RTI symptoms and treatment-seeking behavior among married women of reproductive age.

METHODOLOGY

It was a community based study conducted in rural field practice area of Department of Community Medicine; among married women of reproductive age group. Sample size estimation was based on the assumption of RTI prevalence among women as 18.3%,^[8] absolute error of 5%, and non response rate 20%. The total sample sizes worked out to be 276. This requisite sample was selected from the list of eligible couples available with the health workers, using random number tables. Trained medical social workers conducted home visits for the selected study participants and interviewed them privately after explaining the objective of the study and obtaining written informed consent.

RTI symptoms were defined according to the syndromic case management guideline developed by the WHO.^[9] The symptoms included abnormal vaginal discharge accompanied by foul smell, ulcers in and around the genital region, pain in the lower abdomen not related to menstruation, burning sensation during urination, itching around the vulva and swelling in the groin. The structured questionnaire included questions on menstrual hygiene practice, knowledge regarding RTI symptoms, and treatment-seeking behavior. Contraceptive practices were elicited by asking study participants regarding the type of contraceptive methods used such as oral contraceptive pills, condoms, intrauterine contraceptive device, and tubectomy. Those having symptoms of RTI were asked if they sought health care and whether they disclosed this problem to their family members or friends. The knowledge of the study participants about RTI was assessed by asking them whether they had heard about it and could name any one of its symptoms.

Statistical analysis was performed using the Epi Info software for Windows (CDC Atlanta). For comparison between the "RTI symptom group" and "non-RTI symptom group," Chi-square test of significance was used. $P < 0.05$ was considered statistically significant. Confidentiality and privacy of the data collected were maintained. Approval for this study was obtained from the Institutional

Ethics Committee of Medical College. All women who reported symptoms of RTIs were provided free treatment at the Rural Health Training Center of the Medical College in accordance with WHO syndromic management flowcharts.

RESULTS

The mean age of the study participants was 30.6 years (SD = ± 6.6 years). Out of 276 study participants, 63 (22.8%) were illiterate, 64 (23.2%) had received education up to primary, 74 (26.8%) up to matric, 36 (13%) up to secondary school level, and 39 (14.1%) were graduate or equivalent. The majority of respondents (257/276; 93.1%) were homemaker and remaining 19 (6.9%) were service holders. Among the total 276 participants, 98 (35.5%) women reported suffering from at least one symptom of RTI. The most commonly experienced symptoms were foul-smelling vaginal discharge (68/98; 69.4%) followed by low abdominal pain not associated with menstruation (51/98; 52.0%). The other symptoms were itching around the vulva (23/98; 23.5%), burning urination (19/98; 19.4%), swelling in the groin (11/98; 11.2%), and genital ulcer (8/98; 8.2%). On asking about the possible reason of having the symptoms, 59.2% replied that it can be because of poor genital hygiene while 31.6% did not know the possible reason and the remaining 9.2% gave unrelated reasons ("due to less drinking of water," "because of hot temperature," and "eating hot foods").

"RTI symptoms" were proportionately higher among working women (68.4%) and those having history of abortion (40.7%); as compared with their counterparts. Women used ordinary cloth during menstruation were having higher prevalence of RTI symptoms (53.3%) as compared to those using sanitary pad (41.3%). The prevalence of RTIs increased with parity, being highest in those with 3 children (45.8%) and lowest (28.6%) in the nullipara. [Table 1] A few study participants had heard about RTI and could name any of the symptoms listed in its syndromic definition (42/276; 15.2%).

Among 98 women who suffered from RTI symptoms, only 56 (57.1%) sought treatment for their problem. Government hospital was the preferred place for seeking treatment (66%). About three-fourths of women (72.5%) did not share/disclose the symptoms with family members/friends. The most common reason for not seeking health care was the fact that many considered it

Table 1: Sociodemographic, reproductive, and other factors associated with reproductive tract infection symptoms

| Variable | n | RTI symptoms present (n=98; 35.5%), n (%) | RTI symptoms absent (n=178; 64.5%), n (%) | χ^2 , P |
|--------------------------------------|-----|--|--|--------------|
| Age group (years) | | | | |
| 18-30 years | 158 | 55 (34.8) | 103 (65.2) | 0.07, 0.77 |
| 31-45 years | 118 | 43 (36.4) | 75 (63.6) | |
| Occupation | | | | |
| Homemaker | 257 | 85 (33.1) | 172 (66.9) | 9.6, 0.005 |
| Working | 19 | 13 (68.4) | 6 (31.6) | |
| Education | | | | |
| Illiterate | 63 | 20 (31.7) | 43 (68.3) | 3.3, 0.50 |
| Primary | 64 | 21 (32.8) | 43 (67.2) | |
| Matric | 74 | 28 (37.8) | 46 (62.2) | |
| Secondary | 36 | 17 (47.2) | 19 (52.8) | |
| Graduate and above | 39 | 12 (30.8) | 27 (69.2) | |
| Parity | | | | |
| Nullipara | 14 | 4 (28.6) | 10 (71.4) | 6.4, 0.48 |
| 1 child | 65 | 23 (35.4) | 42 (64.6) | |
| 2 children | 118 | 41 (34.7) | 77 (65.3) | |
| 3 children | 48 | 22 (45.8) | 26 (54.2) | |
| 4 children and above | 24 | 8 (25.8) | 23 (74.2) | |
| History of abortion | | | | |
| Yes | 54 | 22 (40.7) | 32 (59.3) | 1.0, 0.33 |
| No | 202 | 67 (33.2) | 135 (66.8) | |
| Menstrual hygiene practices | | | | |
| Ordinary cloth | 107 | 57 (53.3) | 50 (46.7) | 24.4, 0.001 |
| Sanitary pad | 114 | 26 (22.8) | 88 (77.2) | |
| Both ordinary cloth and sanitary pad | 55 | 15 (27.3) | 40 (72.7) | |
| Contraceptive use | | | | |
| Yes | 102 | 30 (29.4) | 72 (70.6) | 2.6, 0.10 |
| No | 174 | 68 (39.1) | 102 (58.6)s | |
| Contraceptive method in use | | | | |
| Pills | 23 | 12 (52.2) | 11 (47.8) | 9.1, 0.02 |
| Condoms | 57 | 12 (21.1) | 45 (78.9) | |
| IUCD | 12 | 4 (33.3) | 8 (66.7) | |
| Tubectomy | 10 | 2 (20.0) | 8 (80.0) | |

Values in bracket represent percentage. IUCD=Intrauterine contraceptive device, RTI=Reproductive tract infection

normal phenomenon (27/42; 64.3%) followed by the fact that even though they went to hospital, they could not disclose the symptoms (11/42; 26.2%) [Table 2].

DISCUSSION

In the present study, the prevalence of RTI symptoms was found to be 35.5%. Comparative finding has been reported in studies conducted in North India (44%)^[10] and South India (30%–35%).^[11,12] A study done in Himachal Pradesh reported nearly half of the women having RTI symptoms.^[13] A lower prevalence of RTI symptoms has been reported in studies conducted in Punjab (17%) and Tamil Nadu (8.8%).^[14,15] High prevalence of RTI symptoms in our study can

Table 2: Treatment-seeking behavior of study participants having symptoms of reproductive tract infection

| Variable | n (%) |
|---|-----------|
| Treatment (n=98) | |
| Sought treatment | 56 (57.1) |
| Did not seek treatment | 42 (42.9) |
| Place from where treatment sought (n=56) | |
| Government | 37 (66) |
| Private | 19 (34) |
| Reasons for not seeking treatment (n=42) | |
| No money | 4 (9.5) |
| Considered it normal | 27 (64.3) |
| Went to hospital but could not disclose symptoms | 11 (26.2) |
| Disclose symptoms to family/friends (n=98) | |
| Yes | 28 (28.5) |
| No | 70 (72.5) |

possibly be attributed to the low awareness about the disease symptoms, inadequate treatment-seeking behavior, and hiding symptoms from family members and friends.

In the current study, it was observed that the practice of using ordinary cloth during menstruation was related to higher prevalence of RTI. Similar to this finding, a study has reported higher prevalence of the symptoms in those women using cloth during menstruation.^[14] A probable explanation may be the delayed washing, improper washing and non drying of soaked clothes in sunlight due to privacy issues; which increases the chance of infection. Further, in the present study, it was found that few study participants had knowledge about RTI symptoms. Similar finding has been reported in a study conducted in Haryana, India wherein 44% women had never heard of RTI.^[16]

Despite having high proportion of RTI symptoms, only 57% of those affected in the current study sought treatment from health-care facility. A similar finding has been reported in studies conducted elsewhere in India.^[16,17] In the present study, when the study participants were asked about the reason for not seek treatment, majority considered it to be a normal phenomenon in women. A similar finding has been reported by in their study in Haryana.^[16] It was also found that very few of those having symptoms of RTI disclosed it to their family members and friends. This may be attributed to communication barrier, wherein a woman finds it difficult to describe her genital symptoms openly to family members and friends. Morris *et al.* reported that less RTI-related stigma was associated with increased seeking health care for being tested.^[18] Other studies have reported that stigma associated with RTI contributes to decreased health-seeking behavior.^[19,20]

The main strength of the present study is its community-based design and assessing an array of factors predisposing to the risk of RTIs among women in the reproductive age group. There are two main limitations of the current study. First, no laboratory investigations or gynaecological examination was conducted to confirm the type of RTIs. However, we used the standard syndromic case definition approach, which is an approved methodology according to the WHO for RTI case diagnosis and management. Secondly, we could not study factors such as partner history of RTI and history of HIV testing and awareness. Future studies can include these variables.

CONCLUSION

This study reveals a high prevalence of RTI symptoms and inadequate treatment-seeking behavior among married women in the reproductive age group. This high prevalence may be attributed to poor knowledge and hiding it's symptoms from family and friends. It is, therefore, recommended that health-care professionals should create awareness and dispel the associated stigma.

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Conflicts of interest

There are no conflicts of interest.

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