



Original Article

A study on reproductive tract infections among married women in the reproductive age group (15-45 years) in a slum of Kolkata

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Abstract

Objectives : To find out the prevalence of the suggestive symptoms of reproductive tract infections (RTI) and the relation of these symptoms with the different socio-demographic variables, reproductive characteristics, use of intrauterine devices (IUDs) and other contraceptives among the study population. **Methods :** Two hundred and ten married women in the reproductive age group residing in a slum of Kolkata were interviewed. Data obtained was collated and analyzed statistically by proportions and tests of significance (chi-square test and Z-test). **Results:** Out of the total 210 women surveyed, 43.3% had symptoms suggestive of RTI. All of them had abnormal vaginal discharge. Among socio-demographic variables, statistically significant maximum prevalence was observed among the Muslims, illiterates and housewives. Among oral pill users, 65.38% and among condom users, 18.6% had abnormal vaginal discharge. **Conclusions :** Prevalence of the suggestive symptoms of RTI was found to be quite high in the slum community. Therefore, it is necessary to increase awareness regarding the symptoms and complications of RTI/STI among women.

Key words: reproductive tract infections, suggestive symptoms, reproductive age, silent epidemic.

Introduction

Reproductive tract infection (RTI) is a global health problem among women, especially in South East Asia Region (SEAR) countries. They may progress to serious complications and cause a high degree of morbidity during the sexually active period of life. More than a million women and infants die of the complications of

RTI every year. RTI has become a silent epidemic that devastates women's lives¹.

Globally, three different types of RTI cause significant amounts of morbidity and mortality among women – sexually transmitted infections (STIs) (including gonorrhoea, chlamydia, syphilis, trichomonas, and HIV infections); endogenous infections resulting from the overgrowth of organisms normally present in the reproductive tract (such as candidiasis and bacterial vaginosis); and iatrogenic infections related to medical procedures (such as menstrual regulation, abortion or IUD insertion)². The presence of STI increases the risk of acquiring and transmitting HIV infection by three to five times³.

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In India, statistics pertaining to RTI are meager. Moreover, the women are not aware of the symptoms of RTI. Most of these symptoms of RTI as mentioned below are so common among them that they ignore these and usually do not seek treatment for them, as they believe that these discomforts are an inevitable part of womanhood and they must endure them along with other health problems such as menstrual abnormalities, contraceptive side effects, miscarriages etc. This is mainly because of lack of knowledge among these women that these symptoms have morbidity and even if they are suspicious, they are unaware of the complications following such morbidities like infertility and other pregnancy related complications and congenital infections. Even if the latter is known, unless the woman is suffering from alarming symptoms, they refuse to seek health care due to economic and time constraints. They are also too shy to reveal their problems. RTIs have an additional element of shame and humiliation for many women because they are considered unclean and so the fears of social consequences often take priority over fears of health consequences, making the infected women reluctant to inform their partners of their symptoms.

In a slum community, it is not possible for the health provider to examine clinically and investigate all the suggestive cases thoroughly. They have to depend on the self-reported experience of these women with common symptoms of RTI like excessive vaginal discharge with or without odor, irritation around the vaginal area, severe lower abdominal pain, pain or burning sensation while urinating or frequent or difficult urination. So, the treatment of these suspected cases medically by the commonly available drugs in a Government health set-up like doxycycline and metronidazole orally, clotrimazole intravaginally and treatment of the sexual partner, sexual abstinence or use of condom during the course of treatment, are very much helpful and often recommended therapeutically to control such morbidity in the community.

With the above mentioned background, the present study was undertaken with the following objectives: 1) To find out the prevalence of the suggestive symptoms of RTI among women in a slum community. 2) To find out the relation of these symptoms with the different socio-demographic variables, reproductive characteristics, use of IUDs and other contraceptives among the study population.

Methods

Two hundred and ten married women in the reproductive age group (15-45 years) residing in the area served by unit 'A' in our department were interviewed through a pre-designed and pre-tested schedule after obtaining their informed consent. Our unit serves 2514 families with 4930 females, 4957 males and 2498 eligible couples. Sample size was calculated by using a prevalence rate of 70% from a previous study conducted in rural Karnataka for gynecological morbidity⁴.

$N=4PQ/L^2$. Here, $P=70$, $Q=30$, and $L=10\%$. So, $N=1714$. The study women were identified from every 10th house of the study area. Those not willing to participate in the study were excluded. The suggestive symptoms of RTI considered were abnormal vaginal discharge, lower abdominal pain, urinary symptoms, vaginal pruritis, backache, dyspareunia and the suspected cases may be trichomonal vaginitis, candidiasis, anaerobic vaginitis, gonorrhoea, chlamydial vaginitis, syphilis. Treatment was given to the women on the basis of the suggestive symptoms. All the patients were followed up for clinical improvement and the outcome was recorded one month after the date of starting the treatment and it was found that almost all of them were relieved of their symptoms.

Statistical analysis: Data obtained was collated and analyzed statistically by proportions and tests of significance (chi-square and Z-test).

Results

Table 1 shows that, out of the total 210 married women (in the reproductive age group) interviewed, 91 women (43.3%) had suggestive symptoms of RTI. All of them had history of abnormal vaginal discharge, out of which 47.25% had excessive vaginal discharge, 4.39% had yellow-green vaginal discharge, 73.63% had clumpy, thick or frothy vaginal discharge, 9.89% had foul smelling vaginal discharge, 31.87% had vaginal discharge with itching and 1.09% had foul smelling vaginal discharge with itching. Fourteen women (6.7%) had history of lower abdominal pain and 16 women (7.6%) had urinary symptoms. Table II shows that statistically significant association is present between the number of respondents with the suggestive symptoms and socio demographic variables, in case of religion, literacy status and working status, i.e. suffering was more among the women who were Muslims, illiterates and those who were housewives. In Table III,

it is seen that the suggestive symptoms of RTI were more among the women who were married at an early age, had more children (≥ 2) or more abortions (≥ 2), and relevant differences are statistically significant. In Table IV, it is observed that women whose partners were currently using the barrier method of contraception (condom) were comparatively healthier than their other counterparts as far as the suggestive symptoms of RTI are concerned since more than two-thirds of such women (81.43%) were symptomless. Among those following other methods of contraception or not using any method at all, the proportion of women who were symptomless was low, viz. IUD users - 40%, Oral pills users - 34.62%, women with tubectomy - 47.7%, and non-users -46.15%.

Table 1. Distribution of respondents according to suggestive symptoms of RTI (n=210).

Suggestive symptoms	No. of respondents (% Prevalence)
Without symptoms	119 (56.66)
With symptoms*	91 (43.3)
Abnormal vaginal discharge	91 (100)
Excessive	43 (47.25)
Yellow-green	4 (4.39)
Clumpy, thick or frothy	67 (73.63)
Foul smelling	9 (9.89)
With itching	29 (31.87)
Foul smell with itching	1 (1.09)
Lower abdominal pain	14 (6.7)
Urinary symptoms	16 (7.6)

*Multiple response.

None of the patients complained of backache or dyspareunia.

Table 2. Distribution of respondents according to suggestive symptoms of RTI and socio-demographic variables.

Socio-demographic variables	Total No (%)	With suggestive symptoms No (%)
Age group ^a (years)		
15-19	38 (100)	15 (40)
20-24	56 (100)	30 (54)
25-29	26 (100)	13 (50)
30-34	37 (100)	15 (41)
35-39	33 (100)	12 (36)
40-44	20 (100)	6 (30)

Religion ^b

Hindu	170 (100)	66 (38.8)
Muslim	40 (100)	25 (62.5)

Literacy status ^c

Illiterate	42 (100)	28 (66.6)
Just literate	31 (100)	19 (61.3)
Primary	95 (100)	37 (39)
Middle	27 (100)	6 (22.2)
Secondary and above	15 (100)	1 (6.66)

Working status ^d

House wives	91 (100)	66 (72.53)
Working women	119 (100)	25 (21)

Per capita monthly income

of family (Rupees) ^e

<250	10 (100)	6 (60)
250-499	86 (100)	40 (47)
500-749	55 (100)	25 (45)
750-999	29 (100)	10 (34)
≥ 1000	30 (100)	10 (33)

^a $X^2=5.3$, d.f.=5, not significant, $p>0.05$. So, no association is observed between age and number of respondents with the suggestive symptoms.

^b $Z=1.98$, it is >1.64 , significant, $p<0.05$. So, association is observed between religion and number of respondents with the suggestive symptoms. The prevalence of the suggestive symptoms of RTI is observed to be more among the Muslims than the Hindus (62.5% vs 38.8%)

^c $X^2=27.26$, d.f.=4, significant, $p<0.001$. So, association is observed between literacy status and number of respondents with the suggestive symptoms. Maximum prevalence is observed among the illiterates (66.6%)

^d $Z=4.52$, it is >1.64 , significant, $p<0.05$. So, association is observed between working status and number of respondents with the suggestive symptoms. The prevalence of the suggestive symptoms of RTI is observed to be more among the non-working women (housewives) than the working women (72.53% vs 21%).

^e $X^2=3.7$, d.f.=4, not significant, $p>0.05$. Though it is observed that the proportion of women suffering from the suggestive symptoms of RTI decreases with the increase in per-capita income of the family, it is seen that this trend is not statistically associated.

Table 3. Distribution of respondents according to suggestive symptoms of RTI and reproductive characteristics.

Reproductive characteristics	Total No (%)	With suggestive symptoms No (%)
Age at marriage ^a		
10-14	80(100)	26(32.5)
15-19	91(100)	60(65.93)
20-24	39(100)	5(12.8)
Length of current marriage ^b		
<5	33(100)	17(51.51)
5-9	50(100)	27(54)
10-14	20(100)	10(50)
15-19	45(100)	19(42.2)
20-24	27(100)	9(33.3)
≥25	35(100)	9(25.7)
Number of deliveries ^c		
0	48(100)	6(12.5)
1	71(100)	31(43.66)
≥2	91(100)	54(59.34)

Number of abortions ^d

0	130(100)	38(29.23)
1	45(100)	24(53.33)
≥2	35(100)	29(82.85)

^a $X^2=37.53$, d.f.=2, significant, $p<0.001$. So, association is observed between age at marriage and number of respondents with the suggestive symptoms. Maximum prevalence is observed among women with early age at marriage i.e. 15-19 years (65.93%).

^b $X^2=9.1$, d.f.=5, not significant, $p>0.05$. So, no association is observed between length of current marriage and number of respondents with the suggestive symptoms.

^c $X^2=28.07$, d.f.=2, significant, $p<0.001$. So, association is observed between number of deliveries and number of respondents with the suggestive symptoms. The prevalence is observed to be more among women with number of deliveries ≥2 (59.34%) than those with number of deliveries 1 (43.66%) or with number of deliveries 0 (12.5%).

^d $X^2=12.4$, d.f.=2, significant, $p<0.001$. So, association is observed between number of abortions and number of respondents with the suggestive symptoms. The prevalence is observed to be more among women with number of abortions ≥2 (82.85%) than those with number of abortions 1 (53.33%) or with number of abortions 0 (29.23%).

Table 4. Distribution of respondents according symptoms of RTI and contraceptive use (current).(n=210).

	Without symptoms	With suggestive symptoms of RTI*		
	No (%)	Abnormal vaginal Discharge No (%)	Lower abdominal pain No(%)	Urinary symptoms No(%)
IUD (n=10)	4 (40)	6 (60)	-	2 (20)
Oral pills (n=26)	9 (34.62)	17 (65.38)	5 (19.2)	2 (7.7)
Condoms (n=70)	57 (81.43)	13 (18.6)	3 (4.3)	5 (7.14)
Tubectomy (n=65)	31 (47.7)	34 (52.3)	8 (12.3)	12 (18.5)
Non-users (n=39)	18 (46.15)	21 (53.85)	5 (12.8)	6 (15.4)

* Multiple response

Discussion

The present study reveals high prevalence (43.3%) of the suggestive symptoms of RTI among married women in the reproductive age group. The most common

symptom among the respondents was abnormal vaginal discharge. Maximum number of cases was observed in the age group of 20-34 years (48.74%), most probably because women of this age group are most active sexually. This study also shows a higher prevalence

rate of the suggestive symptoms of RTI among the Muslims, which may be attributed to their low socio-economic condition, poor health care utilization and poor personal hygiene. The highest number of women with the suggestive symptoms of RTI was among the illiterates and with an increase in education, the prevalence rate decreased. The suggestive symptoms of RTI were observed to be much less among the working women than their nonworking (housewife) counterparts (21% vs 72.53%). This is because of their contribution to the family income, thereby empowering them to get involved in the decision making process in the family (e.g. use of condom, use of sanitary napkins, use of soap and water etc). This along with their higher literacy, better knowledge regarding menstrual hygiene, better and timely utilization of health care etc. go a long way in the maintenance of a better health status.

In this study, the number of women whose sexual partners were using condoms showed the lowest prevalence of abnormal vaginal discharge and the women using oral pills showed a high prevalence rate. This may be because of candidiasis infection among the latter. The results of this study regarding the suggestive symptoms of RTI with the contraceptive use corroborate the universal fact that the use of condom during sexual intercourse prevents all types of RTI.

The above observations are nearly similar to a study conducted in Udaipur city of Rajasthan¹ where out of the 200 females examined, the total number of RTI positive was 81 (40.50%). The maximum number of RTI cases (62) was observed in the age group of 21-35 years, among the Muslims (50.6%), and among the illiterates (62.5%), while the number of RTI cases decreased with an increase in educational status. There was low prevalence of RTI (16.6%) among females whose partners used condoms. Ram et al⁵ in their study on RTI among female adolescents observed that 35% of the girls had a history of excessive vaginal discharge and the prevalence of infection was highest among the illiterate group of girls (77%).

It can be said that the invisibility and taboo surrounding RTIs and the belief that they should be endured, create a culture of silence within the families and communities that can severely compromise women's health. RTIs are not only common diseases with profound health consequences, but also the one of the world's most

neglected health problems. This is because of the mistaken belief that RTIs are not fatal, that they are too expensive to diagnose and treat, and they affect only small and specialized segments of sexually active adults like prostitutes. All these assumptions can be challenged by the present study. Even if clinical examination and laboratory investigations for all is not feasible, treatment for all based on the suggestive symptoms might mitigate the untold sufferings of many women, as almost all the women treated on the basis of the suggestive symptoms were relieved of their symptoms.

Conclusion

It is necessary to increase awareness among women regarding the symptoms and consequences of RTI/STI, the association between STI and HIV infection. Particular attention should be given to appropriate education and counseling regarding safer sex practice, use of condoms, avoidance of multiple sexual partners, appropriate age at marriage and maintenance of personal hygiene.

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