

## Clinical profile of STIs/RTIs in women in northwest Punjab

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### Abstract

India is one of the most thickly populated countries of the world with a varied cultural background. Sexually transmitted infections/ Reproductive tract infections (STIs/RTIs) still remain a taboo amongst majority of the population in India. Women's health takes a back seat in most households. The National programme against STI/RTI has led to the setting up of Suraksha clinics associated with Dermatology and Obstetrics/Gynaecology departments all over India. This study is an attempt to identify the prevalence of STIs/RTIs in the patients reporting to these clinics. A total of 638 female patients were enrolled in this study. Maximum number of female patients had bacterial vaginosis i.e. 244 patients (38.2%), followed by 205 females (32.1%) having candidal vulvovaginitis. Forty-seven females (7.4%) had cervicitis/cervical erosion, while 40 females presented with non-specific discharge per vaginum. Twenty-nine females (4.5%) had herpes genitalis, 26 (4.1%) had ano-genital warts, 21 (3.3%) had molluscum contagiosum while 12 females (1.9%) were diagnosed to have pelvic inflammatory disease. Also, 12 (1.9%) reported with non-herpetic genital ulcers while 2 (0.3%) had urethral discharge. STI/RTI clinics can contribute to check the spread of STIs through early identification, education, promotion of safe sex and counselling, thus ensuring early treatment and a better quality of life.

**Keywords:** STI, RTI, STI Clinic, RTI clinic, Females, Punjab.

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### Introduction

Sexually transmitted infections (STIs) or Reproductive tract infections (RTIs) are the most formidable enemy of human race; enemies entrenched behind the strongest human passion and deepest social tragedies. The population explosion, migration of rural population to urban centres and increasing promiscuity have all led to enormous spread of sexually transmitted diseases in the community. Females are more severely affected by STIs/RTIs. Due to the conservative social norms of the Indian society, women seldom seek healthcare. Also, STIs in females may be asymptomatic or without typical features.

### Material & Methods

The present study comprised of a prospective, cross-sectional study, examining all female patients reporting in STIs/RTIs attending STI clinic at department of Dermatology, Venereology and Leprosy and RTI clinic of department of Obstetrics and Gynaecology over a period of one year.

A detailed history was taken which included any history of premarital/ extramarital sexual contact, blood transfusion, intravenous drug use and was recorded on a proforma. It was followed by general physical examination and mucocutaneous examination.

The inclusion criteria for the study included sexually active patients presenting to the STI/RTI clinics with discharge per urethra/ per vaginum, ulcers on the genitalia, popular/nodular lesions or warty growths on genitalia. The patients with non-

venereological conditions of the genitalia (e.g. fixed drug eruption, Fordyce spots, lichen simplex chronicus) or those with no history of sexual contact were excluded from the study. A total of 638 female patients reporting to the STI/RTI clinic were included in the study.

Wet mount preparation, KOH smear for *Candida*, Gram staining, Tzank smear, culture and sensitivity testing of discharge and skin biopsy, were performed when indicated.

The data thus obtained was compiled and was analyzed statistically using the Chi-square test and the Fisher's exact test. Standard descriptive statistics such as mean, prevalence and proportion were computed, all p values were two sided and p<0.05 was considered to be statistically significant.

### Results and Discussion

A total of 638 females reporting to the STI/RTI clinic were included in the study. The demographic profile of the cases is shown in Table 1.

**Age:** India has a population of more than 1.25 billion, with half of them in the sexually active age group.<sup>(1)</sup> Out of the 638 females with STI/ RTI, the maximum numbers were in the age group of 16-30 years (50.5%), followed by 43.3% in the age group of 31-45 years. Thirty nine cases (6.1%) were in the age group of 46-60 years while one case (0.2%) was above 60 years of age.

Similar findings have been reported by other authors. In a 13 year study done in Mumbai, the mean age of STI clinic attendees was found to be 26.4 years

for female patients with maximum number of patients in the age group of 18-29 years. Also, there was a gradual increase in the proportion of individuals belonging to the older age group (>35 years) over the course of the study.<sup>(2)</sup> In another study from northern India by Choudhry et al, the mean age of STI clinic attendees 27.36 years for females.<sup>(3)</sup> In a study by Balamurugan & Bendigiri in Karnataka, 71.42% of the female patients having RTI were in the age group of 20-34 years, followed by 15.10% in the age group of 35-45 years.<sup>(4)</sup>

**Rural/Urban:** Out of 638, 380 (59.6%) female patients were from urban background while 258 (40.4%) were from rural background. Similar findings were reported by Bhalla et al in their study, where 75.58% of female patients with RTI were from urban area while 24.4% belonged to rural area.<sup>(5)</sup>

**Educational Status:** Most of the patients reporting to STI/RTI clinics in government hospitals belong to lower or middle class socioeconomic status, with most patients lacking higher education.

In our study, maximum number of patients i.e. 236 (37.0%) females and, followed by 115 (18.0%) patients educated up to eighth standard and 102 patients (16.0%) were educated up to primary level. Also, 83 (13%) patients having education up to 12<sup>th</sup> standard, while 60 patients (9.4%) were illiterate. Thirty seven patients (5.8%) were graduates while only 5 patients (0.8%) were post-graduates.

Similar findings were reported by Choudhry et al who observed that 50% of the females attending STI clinics were illiterate.<sup>(6)</sup> Balamurugan & Bendigiri in their study reported that among 245 female patients having RTI, 60.4% patients were illiterate, 24.8% were educated upto primary level, 8.1% up to secondary level while only 2% had degree education.<sup>(4)</sup>

**Occupational Status:** Out of 638 cases, 498 (78.1%) were housewives, followed by 95 (14.9%) who were skilled labourers and 18 (2.8%) were government employees. 14 (2.2%) were unskilled labourers, 11(1.7%) were students and 2 (0.31%) were engaged in other vocations.

Balamurugan & Bendigiri in their study reported that among 245 female patients having RTI, 94.28% were house-wives, 4.48% were employed and 1.22% was students.<sup>(5)</sup>

In another study, Madhivanan et al reported that out of 898 female patients attending RTI clinics in Mysore, 74% were house-wives. 20% were unskilled labourers and 6% had other occupations.<sup>(7)</sup>

In a study by Jindal et al conducted in Punjab, out of 40 female patients having RTI/STI, 31 (77.5%) were house-wives.<sup>(8)</sup>

**Marital Status:** Majority of the females i.e. 595 (93.3%) were married, while 24 (3.8%) were widows. 14 females (2.2%) were unmarried and 5 (0.8%) were divorced.

Balamurugan & Bendigiri in their study reported that among 245 female patients having RTI, 93.06% were married, 4.48% were unmarried and 2.44% were divorced.<sup>(4)</sup>

The reason for more number of married persons reporting in STI Clinic in our study is that India is a conservative society where females usually do not indulge in pre-marital sex and acquire infection through their spouse. So in married women, marital life itself can become a risk factor for those who get infected by their spouses.

**Pre/Extra-Marital Sexual Contact:** Sexual promiscuity is on the rise in the present society. With technological advancements and wider media exposure, the younger population is at an increased risk for acquiring STIs. The incidence and prevalence of pre & extra-marital sexual contact is on the rise.

In our study 28 females (4.4%) had history of pre or extra marital sexual contact.

Saikia L et al reported among the married individuals in their study, 68% admitted to having extra marital sexual contact.<sup>(9)</sup> Choudhry et al observed 83.3% of females had one sexual partner i.e. the husband.<sup>(6)</sup>

In a study by Jindal et al conducted in Punjab, out of 40 female patients having STI/RTI, none of the female patients gave any history of pre/extra marital sexual contact.<sup>(8)</sup>

**Clinical Manifestations:** STI/RTIs can be ulcerative or non-ulcerative in. Patients complain of discharge per vaginam, burning micturition, erosions or ulcers, warty growths or popular lesions on the genitalia. It is important to obtain relevant history, perform thorough clinical examination and conduct bedside as well as laboratory investigations to reach the diagnosis.

The clinical diagnosis of the patients is shown in Table 2. The table shows that the maximum number of female patients had bacterial vaginosis i.e. 244 patients (38.2%), followed by 205 females (32.1%) having candidial vulvovaginitis. Forty-seven females (7.4%) had cervicitis/cervical erosion, while 40 females presented with non-specific discharge per vaginam. Twenty-nine females (4.5%) had herpes genitalis, 26 (4.1%) had ano-genital warts, 21 (3.3%) had molluscum contagiosum while 12 females (1.9%) were diagnosed to have pelvic inflammatory disease. Also, 12 (1.9%) reported with non-herpetic genital ulcers while 2 (0.3%) had urethral discharge. (Fig. 1)

Puri KJ et al in their study of 100 female patients with vaginal discharge found bacterial vaginosis in 45% of the patients, followed by vulvovaginal candidiasis in 31%, non-specific uro-genital infections in 5%, gonorrhoea in 3% and Trichomoniasis in 2% of the patients.<sup>(9)</sup>

Similar findings were reported by Choudhry et al, who observed that 50% females presented with discharge and 27% females had genital ulcer.<sup>(6)</sup>

Saikia L et al reported that out of 186 patients of STIs examined, candidial vulvovaginitis in female patients was the most common STI (21.5%).<sup>(10)</sup>

Bhalla et al reported in their study of 213 patients with RTIs that 32.8% patients had bacterial vaginosis, 16.9% had candidiasis, 2.8% had Trichomoniasis and 0.95% were sero-positive for HIV antibodies.<sup>(5)</sup>

In another study by Madhivanan et al, bacterial vaginosis was seen in 19.1% of female patients presenting to RTI clinic.<sup>(7)</sup>

Many patients may also present with non-venereological lesions on the genitalia. Such patients need to be counselled about the non-infectious nature of these disorders and advised treatment according to the clinical manifestations.

The following measures can be adopted to arrest the march of these diseases in the community:

- Sex education and education regarding prevention of STI/RTIs and also HIV/AIDS infection.
- Promotion of safe sex i.e. by strict adherence to single sexual partner and by use of condoms, correctly and consistently.
- Maintenance of patient confidentiality, leading to better compliance and regular follow-up by the patient.
- Promotion of woman-initiated prevention methods such as female condoms.
- Counselling regarding the nature of disease and the modes of spread, and knowledge regarding prevention.

STI/RTI clinics can contribute through early identification, thus ensuring early treatment and a better quality of life

**Table 1: Demographic profile of the cases**

S. No.	Parameter	No of cases (n=638)	%
1	<b>Age</b>		
	0-15	0	0.0
	16-30	322	50.5
	31-45	276	43.3
	46-60	39	6.1
	>60	1	0.2
2	<b>Rural/urban</b>		
	Rural	258	40.4
	Urban	380	59.6
3	<b>Level of education</b>		
	Illiterate	60	9.4
	Primary	102	16.0
	Middle	115	18.0
	Matric	236	37.0
	Higher secondary	83	13.0
	Graduate	37	5.8
Post-graduate	5	0.8	

4	<b>Occupation</b>		
	House wife	498	78.1
	Farmer	0	0.0
	Govt. employee	18	2.8
	Unskilled labourer	14	2.2
	Skilled labourer	95	14.9
	Student	11	1.7
	Driver	0	0.0
	Others	2	0.31
5	<b>Marital status</b>		
	Married	595	93.3
	Unmarried	14	2.2
	Widow	24	3.8
	Divorced	5	0.8
6	<b>Premarital/ extra-marital sexual exposure</b>		
	Present	28	4.4
	Absent	610	95.6

**Table 2: Clinical diagnosis of the cases**

Clinical Diagnoses	No. of cases	%age
Bacterial vaginosis	244	38.2
Candidial Vulvovaginitis	205	32.1
Herpes genitalis	29	4.5
Urethral discharge	2	0.3
Genital ulcer disease	12	1.9
Anogenital warts	26	4.1
Molluscum contagiosum	21	3.3
Scabies	0	0.0
Pelvic inflammatory disease	12	1.9
Cervicitis	47	7.4
Pediculosis pubis	0	0.0
Non-specific discharge	40	6.3
Total	638	100.0



**Fig. 1: Genital Herpes: Superficial erosions in small groups**

### Conclusion

In a developing country like India, if it has to aim for a reduction in STIs and RTIs, a greater awareness especially among females should be created and education should begin at grass root level. STI/RTI clinic services can help at all the levels: education, identification, prevention as well as treatment.

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