



PREVALENCE OF RTI AMONG REPRODUCTIVE AGE (18-45 YEARS) WOMEN

Dr. Vasudha Sawant

Dr. Archana Kumbhar

Dr. Supriya Kadam*

*Corresponding Author

KEYWORDS :

INTRODUCTION:

Reproductive health of women is of great importance due to its implications for their own health, health of their children, family members and socioeconomic development of society. Reproductive health has several components such as fertility control, safe motherhood and prevention and control of reproductive tract infections including sexually transmitted diseases.

The International Conference on Population and Development (ICPD) (Cairo, Egypt) in 1994 re-defined the concept of reproductive health and emphasized that prevention and treatment of Reproductive tract infections including Sexually Transmitted Infections are integral to the promotion of Reproductive health.

Women in reproductive age group are at risk of complications from menstruation, pregnancy and childbirth. This problem is more pronounced in developing parts of the world where women often have to deal with unwanted pregnancy, unsafe abortions, problems arising out of contraception, risk of contracting reproductive tract infections (RTIs) and sexually transmitted infections (STIs) including HIV infection, different sociocultural norms and economic dependence which further reduce their capacity to protect themselves from RTI/STIs.

RTI's cause considerable discomfort and reduced economic productivity among both males and females. But the most severe and long-term sequelae arise in women: pelvic inflammatory disease, cervical cancer, infertility, spontaneous abortion and ectopic pregnancy. Untreated RTIs also result in fetal wastage and congenital infections. The impact of RTI on the transmission of HIV infection and the morbidity and mortality of HIV adds substantially to the total health impact of RTI. The presence of an STI increases the risk of acquiring and transmitting HIV infection by three to five times.

AIM AND OBJECTIVES

- To estimate the proportion of women in reproductive age group with RTI in tertiary care hospital.
- To determine various factors having influence on RTI among women in reproductive age group.

MATERIALS AND METHOD

Present cross-sectional study was carried out at outpatient Obstetrics and gynecology department of tertiary care center in Western Maharashtra from January 2019 to September 2021.

Study population

Women of productive age (18 to 45 years) coming to outpatient Obstetrics and gynecology department of tertiary care center.

INCLUSION CRITERIA

All married women in the age group 18 to 45 years in coming to outpatient Obstetrics and gynecology department of tertiary care center.

EXCLUSION CRITERIA:

Women with diagnosed gynecological problems (like carcinoma cervix, fibroid uterus, uterine prolapse)

- Women who were not willing to participate in the study.
- Women who could not be contacted after 3 visits

Sample size

- Sample size (n) calculated with help of following formula
- Where, P = Proportion of patient with RTI in previous study = 43.6% (108)
- Q = 100 - 43.6 = 56.4%
- Z = Statistic for 95% confidence interval = 1.96
- d = Absolute error = 7%
- $n = [(1.96)^2 * 0.436 * 0.564] / (0.07)^2 = 200$
- So, total 200 hundred women from reproductive age group (18-45) coming to outpatient Obstetrics and gynecology department of tertiary care center were included in our study.

RESULTS AND OBSERVATIONS

Table 1: Distribution of study subjects according to presence of RTI

RTI	Number of cases	Percentage
Yes	78	39%
No	122	61%
Total	200	100%

- Out of 200 study subject's Reproductive tract infection (RTI) was reported in 78 (39%) subjects.

Table 2: Distribution of study subjects according to symptoms

Symptoms	Number of cases	Percentage
Lower back pain	57	28.50%
Vaginal discharge	45	22.50%
Low abdominal pain	34	17.00%
Itching around vaginal area	31	15.50%
Painful or burning urination	19	9.50%
Painful intercourse	10	5.00%
Genital ulceration	3	1.50%
Inguinal swelling	1	0.50%
Total	200	100%

Above table shows that distribution of symptoms suggestive of RTI reported by married women. Low back pain was seen in 28.50%, followed by vaginal discharge, 22.50%, low abdominal pain, 17%, itching around vaginal area, 15.50%, painful or burning urination, 9.50%, painful intercourse, 10%, genital ulceration, 3%, and inguinal swelling, 0.4%.

Table 3: Distribution of study subjects according to type of residence

Locality	RTI	No RTI	Total	P-value
Rural	51 (65.38)	35 (28.69)	86 (43.00)	<0.001
Urban	27 (34.62)	87 (71.31)	114 (57.00)	
Total	78	122	200	

In RTI group 65.38% subjects stay in rural area and 34.62% subjects stay in urban area, however in non-RTI group 28.69% subjects stay in rural area and 71.31% subjects stay in urban area. Type of residence of study subjects was not a significant factor for occurrence of RTI in women of reproductive age group (p-value >0.05).

Table 4: Distribution of study subjects according to age

Age group	RTI	No RTI	Total	p-value
18-25	38 (48.72)	37 (30.33)	75 (61.48)	0.074
26-30	25 (32.05)	42 (34.43)	67 (54.92)	
31-35	8 (10.26)	25 (20.49)	33 (27.02)	
36-40	3 (3.85)	9 (7.38)	12 (9.84)	
41-45	4 (5.13)	8 (6.56)	12 (9.84)	

Age wise comparison in RTI and non-RTI study subjects was done. In most of the study subjects RTI observed in age group less than 31 years old married women. 80% subjects of RTI have been appeared in age group of 18-30 years. The mean age of subjects was 29.85 years with standard deviation 6.53 years. In RTI patients mean age of subjects was 26.03 years with standard deviation 6.25, however in non-RTI subjects mean age of cases was 28.02 years with standard deviation 7.25 years.

Table 5: Distribution of study subjects according to parity of cases

Parity	RTI	No RTI	Total	P-value
None	2 (2.56)	18 (14.75)	20 (10.00)	0.006
1-2	40 (51.28)	66 (54.10)	106 (53.00)	
>=3	36 (46.15)	38 (31.15)	74 (37.00)	
Total	78	122	100	

In RTI group 51.28% subjects had parity 1-2 and 46.15% subjects had parity >=3, however in non-RTI group 54.10% subjects had parity 1-2 and 31.15% subjects had parity >=3. Parity of women was a significantly associated with occurrence of RTI (p-value <0.01).

Table 6: Distribution of study subjects according to use of family planning device

Use of family planning device	RTI	No RTI	Total	P-value
Yes	47 (60.26)	92 (75.41)	139 (69.50)	0.023
No	31 (39.74)	30 (24.59)	61 (30.50)	
Total	78	122	100	

In RTI group 60.26% subjects had history of use of family planning device, however in non-RTI group 75.41% subjects had history of use of family planning device. History of use of family planning device was a significantly more among study subjects of non RTI group as compared to non RTI group (p-value <0.05).

Table 7: Distribution of study subjects according to sexual contact during menstruation

Sexual contact during menstruation	RTI	No RTI	Total	P-value
Yes	19 (24.36)	8 (6.56)	27 (13.50)	<0.001
No	59 (75.64)	114 (93.44)	173 (56.50)	
Total	78	122	200	

In RTI group 24.36% subjects had sexual contact during menstruation, however in non-RTI, 6.56% subjects had sexual contact during menstruation. Proportion of study subjects having sexual contact during menstruation was significantly more in RTI group as compared to non RTI group (p-value <0.001).

Table 8: Distribution of study subjects according to material used during menstruation

Material used during menstruation	RTI	No RTI	Total	P-value
Sanitary pad	32 (41.03)	52 (42.62)	84 (42.00)	0.823
Cloth	46 (58.97)	70 (57.38)	116 (58.00)	
Total	78	122	200	

In RTI group 41.03% subjects uses sanitary pad and 58.97% subjects uses cloth during menstruation, however in non-RTI group 42.62% subjects uses sanitary pad and 57.38% subjects uses cloth during menstruation. Material used during menstruation was not a significantly associate with occurrence of RTI (p-value >0.05).

Table 9: Distribution of study subjects according to associated Co-morbidities

Co-morbidities	RTI	No RTI	Total	P-value
Hypertension	Present	10 (12.82)	16 (13.11)	0.951
	absent	68 (87.18)	106 (86.89)	
Diabetes	Present	9 (11.54)	12 (9.84)	0.701
	absent	69 (88.46)	110 (90.16)	
Both hypertension and diabetes	Present	5 (6.41)	8 (6.56)	0.967
	absent	73 (93.59)	114 (93.44)	
Pallor	Present	9 (11.54)	15 (12.30)	0.872
	absent	69 (88.46)	107 (87.70)	

In RTI group 12.82% subjects had hypertension, 11.54% had diabetes, 6.41% had both hypertension and diabetes and 11.54 subjects had pallor. In non-RTI group 13.11% subjects had hypertension, 9.84% had diabetes, 6.56% had both hypertension and diabetes and 12.30% subjects had pallor. Associated comorbidities were equally distributed among both the groups.

Summary

Present cross-sectional study was carried out at outpatient Obstetrics and gynecology department of tertiary care center in Western Maharashtra from January 2019 to September 2021. Total 200 women from reproductive age group (18-45) coming to outpatient Obstetrics and gynecology department of tertiary care center were included in our study.

In present study out of 200 study subjects, Reproductive tract infection (RTI) was reported in 78 (39%) subjects. In most of the study subjects RTI observed in age group less than 31 years old married women. 80% subjects of RTI have been appeared in age group of 18-30 years. In RTI patients mean age of subjects was 26.03 years with standard deviation 6.25, however in non-RTI subjects mean age of cases was 28.02 years with standard deviation 7.25 years.

In our study low back pain was seen in 28.50%, followed by vaginal discharge, 22.50%, low abdominal pain, 17%, itching around vaginal area, 15.50%, painful or burning urination, 9.50%, painful intercourse, 10%, genital ulceration, 3%, and inguinal swelling, 0.4%.

We have been observed that out of 78 subjects of RTI group 48.72% subjects were illiterate and 51.28% cases were literate, however in non-RTI group 47.54% subjects were illiterate and 52.46% subjects were literate. Proportion of literate women was equal among both groups (p-value >0.05).

In our study in RTI group 84.62% subjects were house worker and only 15.38% subjects do business or job, however in non-RTI group 79.51% subjects were house worker and only 20.49% subjects do business or job. Occupation of study subjects was not a significant factor for occurrence of RTI (p-value >0.05).

In present study in RTI group, 28.21% subjects had nuclear family and 71.79% subjects stay in joint family, however in non-RTI group 27.05% subjects had nuclear family and 72.95% subjects stay in joint family. Type of family was not a significant factor for occurrence of RTI in married women (p-value >0.05).

In RTI group 65.38% subjects stay in rural area and 34.62% subjects stay in urban area, however in non-RTI group 28.69% subjects stay in rural area and 71.31% subjects stay in urban area. Type of residence of study subjects was not a significant factor for occurrence of RTI in women of reproductive age group (p-value >0.05).

We observed that in RTI group 28.21% subjects had irregular menstruation cycle, however in non-RTI group 13.93% subjects had irregular menstruation cycle. Irregularity in menstruation cycle was significantly more in study subjects having RTI (p-value <0.05).

In current study in RTI group 41.03% subjects uses sanitary pad and 58.97% subjects uses cloth during menstruation, however in non-RTI group 42.62% subjects uses sanitary pad and 57.38% subjects uses cloth during menstruation. Material used during menstruation was not a significantly associate with occurrence of RTI (p-value >0.05).

In our study in RTI group 41.03% subjects changes pad once a day and

58.97% subjects changes pad twice a day or more during menstruation, however in non-RTI group 17.21% subjects changes pad once a day and 82.79% subjects changes pad twice a day or more during menstruation. Frequency of changing pad during menstruation was not a significantly associated with occurrence of RTI (p-value >0.05).

In RTI group 24.36% subjects had sexual contact during menstruation, however in non-RTI, 6.56% subjects had sexual contact during menstruation. Proportion of study subjects having sexual contact during menstruation was significantly more in RTI group as compared to non RTI group (p-value <0.001).

In our study in RTI group 51.28% subjects had parity 1-2 and 46.15% subjects had parity ≥ 3 . Parity of women was a significantly associated with occurrence of RTI (p-value <0.01).

In present study in RTI group 5% subjects had history of abortion, however in non-RTI group 7.38% subjects had history of abortion. History of abortion of women was not a significantly associated with occurrence of RTI (p-value >0.05).

In RTI group 60.26% subjects had history of use of family planning device, however in non-RTI group 75.41% subjects had history of use of family planning device. History of use of family planning device was a significantly more among study subjects of non RTI group as compared to RTI group (p-value <0.05).

In present study in RTI group 8.97% subjects had infertility, however in non-RTI group 7.38% subjects had infertility. Presence of infertility was not a significantly associated with occurrence of RTI symptom (p-value >0.05).

We observed that in RTI group 47.44% subjects had past history of RTI, however in non-RTI group 19.67% subjects had past history of RTI. Past history of RTI in cases was a significantly more among study subjects of RTI group as compared to non RTI group (p-value <0.001). In our study in RTI group 52.56% subjects their partners had RTI, however in non-RTI group 15.57% subjects their partners had RTI. History of RTI in partner was a significantly more among RTI group as compared to non RTI group (p-value <0.01).

We observed that in RTI group 12.82% subjects had hypertension, 11.54% had diabetes, 6.41% had both hypertension and diabetes and 11.54 subjects had pallor. In non-RTI group 13.11% subjects had hypertension, 9.84% had diabetes, 6.56% had both hypertension and diabetes and 12.30% subjects had pallor. Associated comorbidities were equally distributed among both the groups.

CONCLUSION

In present study we found that:

- Proportion of women with reproductive tract infection was 39%.
- Low back pain was most commonly observed symptom of reproductive tract infection followed by vaginal discharge.
- In women with reproductive tract infection following factors significantly associated with occurrence of reproductive tract infection:
 - Irregularity of menstrual cycle
 - Sexual contact during bleeding phase of menstrual cycle
 - Parity ≥ 3
 - Past history reproductive tract infection
 - History of reproductive tract infection in partner
- In women without reproductive tract infection proportion of women with use of family planning device significantly more as compared to those who had reproductive tract infection.

REFERENCES:

1. Annual Report to the People on Health, Government of India, Ministry of Health and Family Welfare, September 2010. <http://mohfw.nic.in/showfile.php?lid=121>
2. UN Report of the International Conference on Population and Development, Cairo, 5-13 September 1994. New York: United Nations, 1995: Sales No. 95.XIII.18
3. World Health Organisation, Department of Reproductive Health and Research. Prevalence and incidence of selected sexually transmitted infections- Chlamydia trachomatis, Neisseria gonorrhoeae, syphilis and Trichomonas vaginalis, 2011. <http://www.who.int/reproductivehealth/publications/rtis/9789241502450/en/in dex.html>
4. General Assembly Special Session on ICPD+5, Address of Director-General, WHO, 30 June-2 July, 1999.
5. Kanitkar T; Radkar A. Self-reported Symptoms of Reproductive Health Problems of Women in India Demography India; July-December 2004; 33(2): 231-248.
6. International Institute for population Sciences (IIPS). District Level Household Survey (DLHS-3), 2007-08: India. Mumbai: IIPS. <http://www.jsk.gov.in/dlhs3/India.pdf>
7. AIDSInfo- Country Fact sheets, UNAIDS. <http://www.unaids.org/en/dataanalysis/tools/aidsinfo/countryfactsheets/>

8. GOI. Basic guide to reproductive and child health program for use by NGO's, training institutions and health functionaries. New Delhi: MOH and FW, GOI; 1997.
9. World Health Organisation, Department of Reproductive Health and Research. Sexually transmitted and other reproductive tract infections: a guide to essential practice. 2005 <http://whqlibdoc.who.int/publications/2005/9241592656.pdf>
10. Ramesh Chellan. Gynaecological morbidity and treatment seeking behaviour in South India. Journal of Health and Population in Developing countries. Date published 15, November, 2004. <http://www.jhpcdc.unc.edu/>