International Journal of Research in Medical Sciences
Thekdi KP et al. Int J Res Med Sci. 2014 Feb;2(1):215-221
www.msjonline.org
pISSN 2320-6071 | eISSN 2320-6012
DOI: 10.5455/2320-6012.ijrms20140242

Research Article

A cross sectional study on the prevalence of reproductive tract infections amongst married women in the rural area of Surendranagar district

Komal P. Thekdi[1]*, K. G. Patel[2], Nita K. Patel[3], Pukur I. Thekdi[2]

[1]Department of Preventive and Social Medicine, C U Shah Medical College, Surendranagar, Gujarat, India
[2]Department of Surgery, C U Shah Medical College, Surendranagar, Gujarat, India
[3]Department of Obstetrics and Gynecology, C U Shah Medical College, Surendranagar, Gujarat, India

Received: 3 November 2013
Accepted: 13 November 2013

***Correspondence:**
Dr. Komal P. Thekdi,
E-mail: p_thekdi@yahoo.com

ABSTRACT

Background: In the recent years, the issue of gynaecological problems of poor women in the developing countries has been receiving increasing attention. High levels of gynaecological morbidity, especially reproductive tract infections and sexually transmitted infections may turn out to be fatal if not treated properly. Objectives of current study were to find out the prevalence of reproductive tract infections amongst married women, to co-relate the disease with certain socio demographic variables and to assess the awareness about reproductive tract infections in the study population.
Methods: Sample size - Various community based studies carried out in the different regions world showed the prevalence of reproductive tract infections 36-84%. The sample size of study as per statistical calculation ($4pq/l^2$, where p =50, q=100-p and l= 10% of p) came out to be 400. Method of Sampling - Prior enlisting all villages of Surendranagar district, one village was selected randomly. After random selection the village found was Khodu.
Results: 56.5% of women reported either one or more symptoms of reproductive tract infections; vaginal discharge (29.7%) was the commonest symptom. Basic awareness about disease was 64.0%; Maximum prevalence of reproductive tract infections (62.90%) was found in the age group of 25-34 years.
Conclusions: There is a significant association between socio-economic class, educational status and women having symptoms of reproductive tract infections.

Keywords: Married women, Reproductive tract infections, Prevention

INTRODUCTION

Reproductive morbidity refers to conditions of ill health related to the reproductive process during and outside the child bearing period. Reproductive morbidity has been classified into three types - Obstetric, Gynaecological, and Contraceptive.[1,2]

In the recent years, the issue of gynaecological problems of poor women in the developing countries has been receiving increasing attention. Gynaecological morbidity refers to reproductive morbidity other than related to pregnancy, abortion, child bearing and contraception. High levels of gynaecological morbidity, especially reproductive tract infections and sexually transmitted infections may turn out to be fatal if not treated properly.[3]

Aims and objectives

To find out the prevalence of reproductive tract infections amongst married women in the rural areas of Surendranagar district and to co-relate the disease with certain socio demographic variables, to find out the basic

awareness about reproductive tract infections and treatment necessity for it in the study population

METHODS

Sample size

Various community based studies carried out in the different regions world showed the prevalence of reproductive tract infections 36-84%. Based on the prevalence of Reproductive tract infections derived from pilot study carried out among married women of reproductive age group in this area, the prevalence was found 50%; .the sample size of study as per statistical calculation ($4pq/l^2$, where p =50, q=100-p and l= 10% of p) came out to be 400.

Method of sampling

Prior enlisting all villages of Surendranagar district, one village was selected randomly. After random selection the village found was Khodu.

The houses in area were listed and a randomly selected house was taken as the first house to be surveyed. Houses were selected only from one direction of the lane to avoid cross selection and duplication, and continued till the blind end was reached. In the next lane the same procedure was followed till the entire sample size was achieved.

RESULTS

Table 1 shows that out of 400 women; 56.5% of women reported either one or more symptoms of reproductive tract infections, thus the overall prevalence of reproductive tract infections among study group was 56.5%.

Among symptomatic women vaginal discharge (26.3%) was the commonest symptom reported by reproductive age group of women. Amongst women who reported discharge as an important symptom, 21.5% women had curd like whitish discharge, 4.8% women reported purulent type of discharge, and 2.0 had frothy foul smelling greenish discharge whereas only 1.0 % of women reported pus along with blood stained discharge. Vaginal discharge with other symptoms were vulval itching (8.8%), low backache (7.0%), burning micturition (3.3%), menstrual problems like dysmenorrhoea, irregularity of menstrual cycle (2.8%), lower abdominal pain (2.5%), dyspareunia (1.8%) and genital ulcerations (0.8%).

Table 2 shows that basic awareness about disease amongst reproductive age group of women was 64.0%; Knowledge regarding treatment necessity 75.3% of women said that treatment should be taken. Majority of women 44% of them told that treatment should be taken from doctor followed by health workers, nurse, chemist, self-treatment and others like faith healers, homemade remedies etc (16.0%, 9.5%, 2.5%, 1.8%, 1.5%).

Table 1: Prevalence of reproductive tract infections amongst married women in the rural area of Surendranagar district (N=400).

Findings (Symptoms/signs)	Frequency (N=400)	Percentage (%)
Symptoms present	226	56.5
1. Vaginal discharge **Type of discharge** 1.1 Curd like whitish 1.2 Purulent 1.3 Frothy foul-smelling Greenish 1.4 Blood along with pus	105 86 19 08 06	26.3 21.5 4.8 2.0 1.5
2. Vulval itching	35	8.8
3. Low backache	28	7.0
4. Lower abdominal pain	10	2.5
5. Genital ulcerations	03	0.8
6. Burning micturition	13	3.3
7. Menstrual problems	11	2.8
8. Dyspareunia	07	1.8
Multiple responses 1.Inguinal lymph node-enlargement vaginal discharge, low backache	02	0.5
2.Vaginal discharge, vulval itching, lower abdominal pain, Inguinal lymph node enlargement	3	0.8
3. Vaginal discharge, burning micturition, menstrual problems	5	1.3
4. Vaginal discharge, burning micturition, low backache, lower abdominal pain, vulval itching, dyspareunia	4	1.0

Table 3 shows that maximum numbers of symptomatic women were (62.90%) were in 25-34 yrs age group. There was a significant association between age group women and symptoms were present in them (χ^2= 7.787, d.f.= 2, P value <0.05).

Table 2: Basic awareness regarding reproductive tract infections and treatment necessity for it among study group (N=400).

Knowledge of women	Frequency (N=400)	Percentage
Awareness of disease		
1. Yes	256	64.0
2. No	144	36.0
Total	400	100%
Knowledge regarding treatment necessity		
Yes	301	75.3
To whom:		
Doctor	176	44.0
Nurse	38	9.5
Health workers	64	16.0
Chemist	10	2.5
Self	6	1.5
Others	7	1.8
No	99	24.7
Reasons		
Social reasons	64	16.0
Personal reasons	35	8.7

There was a significant association between the educational status of women and symptoms found among them (χ^2=58.471, d.f. =5, P value <0.0001).

Symptoms found among women in reproductive age group in which maximum symptomatic women (67.13%) were labourers followed by 31.57% of symptomatic women were housewives followed by 25.0% symptomatic women were doing job and 18.18% were in other occupations (χ^2=46.963, d.f. =3, P value <0.0001).

There was a significant association between symptoms found in women and their husbands' education (χ^2=16.607, d.f. =5, P value <0.005).

Regarding symptoms found in women and their association with their husbands' occupation 62.96% of symptomatic women with their husbands' occupation as farmers followed by 62.84% of symptomatic women with their husband's occupation as labourers. There was a significant association between symptomatic women and their husbands' occupation (χ^2=15.152, d.f. =5, P value <0.05).

There was a significant association between type of family and number of symptomatic women belongs to them (χ^2=15.460, d.f. =4, P value <0.05).

Table 3: Distribution of symptomatic patients in relation to socio-demographic characteristics (N= 400).

Socio-demographic characteristics	Total no. of study population	No. of symptomatic patients	Percentage of symptomatic patients (%)	P value at 5% significance level
Age group				
15-24yrs	145 (36.3%)	69	47.59	
25-34yrs	186 (46.5%)	117	62.90	0.02
35-44yrs	69 (17.3%)	40	57.97	
Marital status				
Married	391 (97.8%)	222	56.77	0.336
Widowed/ Divorcee/ Separated	9 (2.3%)	4	44.44	
Education of woman				
Illiterate	126 (31.5%)	96	76.19	0.0001
Primary	135 (33.8%)	85	62.96	
Secondary	62 (15.5%)	26	41.94	
Higher-Seco.	38 (9.5%)	12	31.57	
Intermediate or Diploma	9 (2.3%)	2	22.22	
Graduate and above	30 (7.5%)	6	20.00	
Occupation of women				

House wife	95 (23.8%)	30	31.57	
Labourer	286 (71.5%)	192	67.13	0.0001
Service	8 (2.0%)	2	25.00	
Others	11 (2.8%)	2	18.18	
Education of husband				
Illiterate	105 (26.3%)			
Primary	124(31.0%)	73	69.52	
Secondary	82(20.5%)	75	60.48	
Higher –Seco.	50(12.5%)	39	47.56	
Intermediate or	10 (2.5%)	22	44.00	0.005
Diploma		4	40.00	
Graduate and above	29(7.3%)	13	44.82	
Occupation of husband				
Unemployed	6 (1.5%)	2	33.33	
Labourer	218 (54.5%)	137	62.84	
Farmer	54 (13.5%)	34	62.96	
Service	52 (13.0%)	24	46.15	0.01
Business	60 (15.0%)	26	43.33	
Retired	10 (2.5%)	3	30.00	
Type of family				
Nuclear family	60 (15.0%)	21	35.00	
Joint family	107 (26.8%)	65	60.75	
Extended Joint	128 (32.0%)	74	57.81	0.004
Three generation	105 (26.3%)	66	62.85	
Socio-economic Class				
Class I	24 (6.0%)	7	29.16	
Class II	46 (11.5%)	18	39.13	
Class III	62 (15.5%)	27	43.54	0.01
Class IV	118 (29.5%)	63	53.39	
Class V	150 (37.5%)	111	74.00	
Housing score				
Good	64 (16.0%)	23	35.94	
Fair	159 (39.8%)	90	56.60	
Poor	177 (44.3%)	113	63.84	0.001
Over crowding				
Yes	296 (74.0%)	173	58.45	
No	104 (26.0%)	53	50.96	0.852

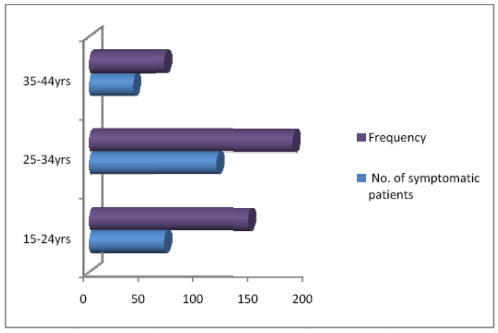

Figure 1: No. of symptomatic women and their association with their age group.

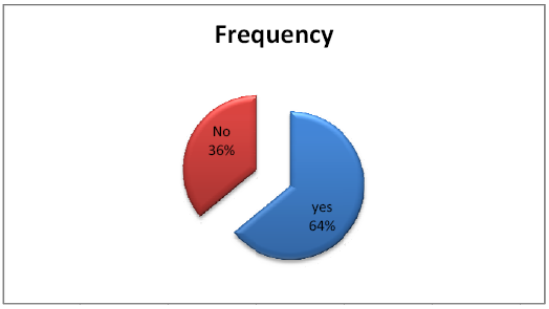

Figure 2: Awareness of disease among reproductive age group of women in the rural area of Surendranagar district (N=400).

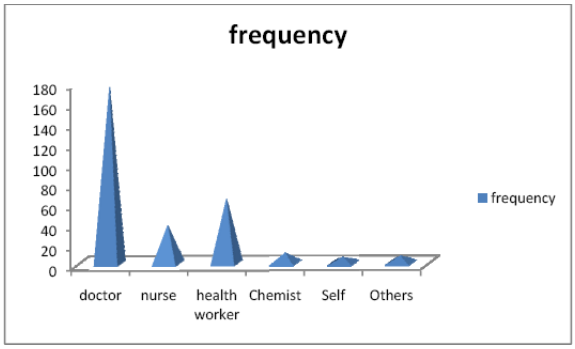

Figure 3: Knowledge of women regarding treatment accessibility for reproductive tract infections.

There was a significant association between the housing score and the number of symptomatic women. (χ^2=14.893, d.f. = 2, P value <0.001)

Regarding symptomatic women belong to socio-economic class; Majority (74%) of women belong to socio-economic class V followed by 53.39% of symptomatic women were found from socio-economic class IV; whereas 43.54% of symptomatic women belong to class III followed by 39.13% of symptomatic women were from class II whereas only 29.16% of symptomatic women were from class I. There was a significant association between the socio-economic class and number of symptomatic women belongs to it. (χ^2=17.498, d.f. = 4, P value <0.01)

DISCUSSION

Regarding the prevalence of reproductive tract infections 43.5% of women did not report any kind of symptoms of reproductive tract infections; whereas 56.5% of women reported one or other kind of symptoms of reproductive tract infections. Thus the overall prevalence in our study is 56.5%. A study conducted in rural Haryana in which prevalence of reproductive tract infection was 61%,[4] a study conducted in rural Indian women in which the prevalence of reproductive tract infections was 62%, whereas a study conducted in Papua New Guinea the prevalence of reproductive tract infections was 59%.[5] A study conducted in highlands and coastal region of Peru where 77% of women reported symptoms of reproductive tract infections,[6] whereas a study conducted in Lagos Nigeria where the prevalence of reproductive tract infections was 37.4%;[7] whereas a study conducted in West Bengal where the prevalence of reproductive tract infections was 66.1%[8] The prevalence of reproductive tract infections in rural area of Agra was found 49%.[9] Comparatively low prevalence was found in the studies conducted in slum and rural area of Chandigarh.[10,11] A study conducted in Shimla city, Northern India where the prevalence of reproductive tract infections was 41.3%[12] whereas a study conducted in the district of Sirmour (Himachal Pradesh) in which the prevalence of reproductive tract infection was 51.9%.[13] The reason for such high prevalence of reproductive tract infections was probably due to the low literacy status amongst rural women and lack of awareness regarding reproductive tract infections amongst women.

In our study vaginal discharge was the commonest symptom found amongst women (26.3%) followed by vulval itching (8.8%), low backache (7.0%), Burning Micturition (3.3%), Menstrual problems like Dysmenorrhoea, irregularities of menstrual cycle (2.8%), lower abdominal pain (2.5%), dyspareunia (1.8%) and genital ulcerations (0.8%). Some women reported more than one symptom of reproductive tract infections; Whereas a study conducted in Sirmour district where the majority of women reported vaginal discharge was the commonest symptom followed by lower abdominal pain, Genital ulcer disease, Inguinal lymphadenopathy and other reproductive morbidities like menstrual problems, lower backache and burning micturition; more than one symptom were also reported by some women.[13] A study conducted in West Bengal in which 21.8% of women reported vaginal discharge as the commonest symptom followed by other symptoms like vulval itching (17.7%), lower abdominal pain (15.0%) followed by pain due to menstrual irregularities etc.[14] A study conducted by Ramesh Chellan in South India in which the vaginal discharge was the commonest symptom (32.2%) followed by burning sensation (7.8%), lower abdominal pain (6.7%). Regarding the types of vaginal discharge, majority of women had mucoid non-foul smelling discharge (73.7%), followed by thick curdy white discharge (20.5%), dirty foul smelling discharge (4.3%), followed by thick grey white foul smelling discharge found;[3] whereas in our study majority of women had Curd like whitish discharge (21.5%) followed by Purulent (4.8%), frothy foul-smelling greenish discharge and blood along with pus (1.5%).

Maximum prevalence of reproductive tract infections (62.90%) was found in the age group of 25-34 years. Similar results were found in other studies by Savita Sharma et al., Nandan et al. and Kabiru A Rabiu et al.[15-17] The reason being this period is of maximum sexual and reproductive activity and therefore there are maximum chances of reproductive tract infections at this age group.

Regarding prevalence of reproductive tract infections and literacy maximum prevalence was found among illiterate women (76.19%) who gradually decreased as the education of women increased. Study by Savita Sharma et al. in which the prevalence of reproductive tract infections (72.2%) among illiterate women, suggesting that education plays a very important role in increasing awareness regarding the disease.

Maximum prevalence (67.13%) was found in labourers especially working in the farm followed by (31.57%) amongst housewives. Almost similar findings were found in the study conducted by Savita Sharma et al. in which the maximum prevalence (61.7%) of reproductive tract infections was found amongst women who were working in the fields and rearing domestic animals[3,8] The reason being women who were labourers and working in the farm

probably might not be able to take care of them and maintain personal hygiene. The other reason could be that because of lack of time they would not be going to seek medical care, and even if they had consulted and treatment taken, due to ignorance and negligence, compliance was poor.

There was a significant association found with the women having symptoms of reproductive tract infections and their educational status of husbands. Women having reproductive tract infections decreased as their husbands' educational status increased suggesting the important role of the education in preventing sexually transmitted diseases.

Majority of symptomatic women were staying in 3 generation family (62.85%) followed by joint family (60.75%), extended joint family and nuclear family (35.00%) and the difference was significant.

Majority of the women (44.3%) having symptoms belonged to poor housing condition. A similar result found in the study carried out by Ramesh Chellan in South India in which women having poor housing score reported symptoms of reproductive tract infections more as compared to women having good housing score.

There is a significant association between socio-economic class and women having symptoms of reproductive tract infections. A similar result found in the study carried out by A Parashar et al. in Shimla town in which majority of symptomatic women (69.2%) belong to class IV according to Prasad's classification followed by (54.3%) belong to class III followed by (43.3%) of women belong to class II whereas only (21.2%) belong to class I.[18] Socio economic status plays a very important role for a healthy life. There are many factors interwoven with it like nutritional status, personal hygiene, income, educational status. Hence it is very obvious that prevalence showed an inverse relation with socio-economic classes. Better living standards brought down the chances of infections.

Majority of women having symptoms of reproductive tract infections (58.45%) resided in overcrowding dwellings. Although there is no significant association between symptoms of reproductive tract infections and women resided in overcrowding dwellings, overcrowding acts as a contributory factor for the development of reproductive tract infections.

Regarding basic awareness, 64.0% of women had basic understanding regarding reproductive tract infections, Similar studies conducted in Nigeria, rural West Bengal and Kenya were 77.2%, 57% and 96% respectively.[19,20] Regarding disease occurrence and transmission of reproductive tract infections

Knowledge regarding treatment necessity 75.3% of women said that treatment should be taken. Majority of women 44% of them told that treatment should be taken from doctor followed by health workers, nurse, chemist, self treatment and others like faith healers, homemade remedies etc (16.0%, 9.5%, 2.5%, 1.8%, 1.5%). Reason treatment should not be taken were social reasons (16.0%) and personal reasons (8.7%). A study conducted in Uganda almost 60% of women reported that treatment should be taken from faith healers or self treatment should be done.[21] Whereas in study conducted among Karachi Women, the women preferred Hakims and allopathic doctors.[22] The reasons for not taking treatment were shyness, feeling that no treatment was needed as they were common among women and financial problems were given by women amongst study conducted in rural Mysore.[23] Health seeking attitude of women regarding reproductive tract infections in women is 75.3% which is good and majority of them preferred to take treatment from doctors the reason for that information available through peripheral health workers and during routine ANC visits also the information regarding the prevention and timely treatment are also provided. Almost 24.7% of women reported that treatment should not be taken because of social reason and personal reason for that still IEC activities are promoted and stigma related to reproductive tract infections should be taken into consideration because it directly affects the health-seeking attitude of the patients especially women.

Funding: No funding sources
Conflict of interest: None declared
Ethical approval: The study was approved by the institutional ethics committee

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DOI: 10.5455/2320-6012.ijrms20140242
Cite this article as: Thekdi KP, Patel KG, Patel NK, Thekdi PI. A cross sectional study on the prevalence of reproductive tract infections amongst married women in the rural area of Surendranagar district. Int J Res Med Sci 2014;2:215-21.