Reproductive morbidity in an Indian urban slum: need for health action

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In developing countries the mortality and morbidity due to reproductive tract infections/sexually transmitted infections (RTIs/STIs) are very high relative to those associated with other health problems. The consequences of RTIs which are numerous and potentially devastating include postabortal and puerperal sepsis, ectopic pregnancy, fetal and perinatal death, cervical cancer, infertility, chronic physical pain, emotional distress, and social rejection in women. The impact of RTIs on the transmission of HIV infection and the morbidity and mortality of HIV adds substantially to the total health impact of RTIs.

This study has been conducted in an urban slum in the vicinity of Maulana Azad Medical College, of New Delhi, India, during August 1996 to November 2000. The slum settings are characterised by a migratory population living under overcrowded and stressful conditions, where loosened traditional and social constraints, a range of sociocultural factors, and economic compulsions limit access to health care and social support services, thereby providing an environment conducive to acquiring and transmitting RTIs/STIs.

The slum comprised 826 huts with a total population of 3676. The area had adverse sex ratio, 635 females per 1000 males and there were 500 (13.6%) single men. The majority of residents were migrants from the neighbouring states of Uttar Pradesh and Bihar.

The present study was conducted with the objective of assessing the prevalence of various RTIs among married women in the urban slum setting using peripheral (field level) and confirmatory laboratory tests.

PARTICIPANTS AND METHODS

The study population consisted of all 446 ever married women aged 15–45 years residing in the area. It was decided to include all women in the study to fulfil the obligation of not denying diagnosis and treatment to any.

To enrol the eligible subjects, a demographic survey was conducted which included a house to house survey. A quantitative reproductive health schedule (RHS) developed after exhaustive qualitative study was administered to all the enrolled study subjects. The schedule included data on sociodemographic characteristics, perceived symptoms of reproductive morbidity, personal and genital hygiene, care seeking behaviour, obstetric and contraceptive history. After the interviews, these women were simultaneously referred to the clinic established within the community for the purpose of diagnosis and treatment of RTIs/STIs. Culture sensitive strategies were used to create awareness among all women regarding need for examination. All the study subjects were asked to visit the peripheral health clinic shortly after the home interviews. In the clinic, a detailed history was taken followed by general physical examination, internal examination along with the collection of relevant samples (four vaginal and four cervical) by a female gynaecologist. The specimens were transported to the microbiological laboratory on the same day by the technician. For pathogens with multiple diagnostic tests, the infection was considered positive in the event of either of the laboratory tests being positive, in order to maximise sensitivity (table 1).

The data were processed and analysed using SPSS software. Categorical data were compared using χ² or Fisher’s exact tests, as applicable.

### RESULTS AND COMMENTS

Of the 446 women enrolled, 380 (85%) reported to the clinic and 66 women (15%) were non-responders. Of the 380 subjects 72% were illiterate and 30% belonged to families having income >2000 rupees (US$42) per month. The mean age of responders was 28.2 (SD 6.6) years, mean age at marriage 15.2 (3.2) years, mean age at consummation of marriage 16.2 (2.6) years, and mean age at first child birth 18.4 (2.8) years. The mean parity was 3.3 and mean gravidity was 3.8. A total of 29% of responders had a history of abortions (spontaneous or induced).

Overall, 332 (87%) women gave their blood for examination and 301 (79%) underwent internal examination and their samples (vaginal and cervical) were collected for laboratory tests.

### Prevalence of symptoms in study population

Symptoms of gynaecological morbidity were reported by the majority (334, 88%) of women who responded to clinic. The common morbidities reported were low backache 243 (64%), vaginal discharge 216 (57%), low abdominal pain 160 (42%), menstrual problems 98 (26%), urinary complaints 78 (20%), prolapse 60 (16%), infertility 31 (8%), and genital ulcers by 11 (3%) women.

In Indian community based studies the range of self reported morbidity has been reported to vary from 39% to 84%. The considerable burden of reproductive morbidity in Indian communities warrants an urgent need for community based interventions.

### Prevalence of infections in study population

Most of the Indian studies in the field of reproductive morbidity are based on clinical examination. The present study results are based on laboratory tests (table 1).

There was high prevalence of bacterial vaginosis (41%), chlamydia (29%), and
HIV transmission. The trends are enough

ing spread of RTIs/STIs which are also

tion to this problem in the healthcare

indicates the need to pay serious atten-

sis. The high prevalence of RTIs/STIs

especially for chlamydia, health workers

and in the absence of cost effective tests,

morbidity, especially chlamydia, in this

shown by different studies could be

was detected (table 1).

were trichomoniasis (4%), syphilis (4%),

candida (19%). Other infections detected

were chlamydia, 69% were found to be

infected. Among 261 women screened for

seven infections, 188 (72%) were found
to be infected.

A study carried out in rural Mahar-

ashtra (in 1989) detected a higher preva-

lence of bacterial vaginosis (62%), candi-

diasis (34%), trichomoniasis (13.98%),

and syphilis (10.5%) compared to the

present study.2 In rural Karnataka and

Mumbai the prevalence of trichomonia-

sis was 7% and 10% respectively, which

is higher compared to present study.4 5 A

significant finding of the present study

has been a high prevalence of chlamydia

(29%) compared to all other studies. In

the community based studies carried out

in different parts of the country preva-

lence of chlamydia varies from <1% to

14%, which was found to be lower than

in the current study. Regarding gonor-

rhea and syphilis the community stud-

ies have found the prevalence to be <2%

and <11% respectively.

There is growing recognition that

women from poorer sections of the com-

munity carry a heavy burden of repro-

ductive morbidity and are at high risk of

infection. Male supremacy in Indian

society, along with the restrictive social

structure, limits women's independence,

leading to strong male control over

female sexuality. The invisibility and

taboo surrounding RTIs and the belief

that they should be ended, create a

culture of silence within families and

communities that can severely comprom-

ise women's health.6

This varying degree of prevalence

shown by different studies could be

attributed to the type of screening tests

which differ in sensitivity and specificity.

The high prevalence of reproductive

morbidity, especially chlamydia, in this

population needs to be explored further

and in the absence of cost effective tests,

especially for chlamydia, health workers

in peripheral settings have to be trained
to carefully elicit symptoms, and use

standardised criteria for clinical diagno-

sis. The high prevalence of RTIs/STIs

indicates the need to pay serious atten-

tion to this problem in the healthcare
delivery services.

There is a clear indication of the grow-
ing spread of RTIs/STIs which are also

known to be an augmenting factor for

HIV transmission. The trends are enough
to warrant a comprehensive culture sen-
sitive approach for all RTIs/STIs, and

their integration and implementation

into reproductive health services. Two

basic components in such an approach

must be an ever widening range of

people within the health system and

outside who are skilled in communicat-

ing matters relating to sexuality and

reproductive illnesses that are not preg-
nancy related; and the routine inclusion

of RTI/STI screening in antenatal and

other gynaecological examination, and

improved quality of peripheral diagno-

tic tests which are already envisaged

under the RCH programme of govern-

ment of India.

GLOBAL VIEW

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Key messages

• Symptoms of gynaecological morbidity were reported by 88% women. A high

prevalence of bacterial vaginosis (41%), chlamydia (29%), and candidiasis (19%)

was observed. The majority (72%) of women were found to be infected using labo-

ratory tests.

• A significant finding of the present study has been a high prevalence of chlamydia

(29%) compared to all other community based studies in an Indian context.

• In the absence of cost effective tests, especially for chlamydia, health workers in peri-

pheral settings have to be trained to carefully elicit risk history, symptoms, and use

standardised criteria for clinical diagnosis.

• The study calls for routine inclusion of RTI/STI screening in antenatal and other

gynaecology clinics, and improved quality of peripheral diagnostic tests, which is

already envisaged under RCH programme of the government of India.

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CONTRIBUTORS

SG was the project coordinator and principal investigator responsible for idea and concep-
tualisation of the study; NS, PB, RS, BCD, SS, and NSM were the co-investigators; RS was
the social anthropologist, and UR was the gynaecologist; SG and NSM coordinated the
study protocol; SG coordinated fund raising and supervised the study; PB and BCD were
responsible for microbiological tests including PCR. All the investigators actively contributed
to the execution of study. RS, SS, and NSM were responsible for data management and
did the analysis; SG, NS, PB, RS prepared the paper with inputs from all the investigators.

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