

## ANTENATAL SCREENING OF SEXUALLY TRANSMITTED DISEASES

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### SUMMARY

Two hundred and fifty patients attending the antenatal O. P. D. of M. L. N. Medical College, Allahabad were recorded randomly over one year. Vaginal swabs were taken for microscopical examinations and cultures for trichomonas, candida and H. Vaginalis infections. Cervical swabs were taken for N. Gonorrhoea and Chlamydia trachomatis. Serum samples were tested for T. Pallidum by VDRL and AIDS by ELISA techniques. Chlamydia trachomatis was isolated solely by detection of inclusion bodies in Giemsa stained specimen of cervical swab. The prevalence of infection of T. Vaginalis was found to be 9.2%; Candida 19.2%; H. Vaginalis 16%; Chlamydia 1.2%; Gonococcus 0%; AIDS 0% and Sero positivity by VDRL for Syphilis was 3.2%. Leucorrhoea was the common symptom of the first three pathogens, while clinical lesions like vaginitis and cervicitis harboured maximal STDs. T. Vaginalis, Candida, H. Vaginalis and VDRL sero positive cases were mostly encountered in the age group of 20-29 years.

### INTRODUCTION

The prevalence of sexually transmitted diseases (STDs) has increased in the last fifteen years. Recently it has attracted global attention because of their implication of carcinogenesis and some pathogens are in epidemic form. The exact magnitude of the problem in developing countries are not notifiable as the STD clinics in most of the

countries are few and far between. STDs not only affect the individual but their progeny too.

Miscarriage and stillbirths are more common in Syphilis. The present study is designed to carryout the prevalence of STDs among antenatal clinic attenders in the out patient deptt. of S. R. N. Hospital.

### MATERIALS AND METHODS

The study was carried out in the year 1988-89 and a sample size of 250 pregnant

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*Accepted for Publication on 06.10.1993.*

women were selected randomly in the antenatal outpatient deptt. of Obstetrics and Gynaecology, S. R. N. Hospital, Allahabad. Every seventh patient was examined until 250 cases had been seen. The age, obstetric history with special reference to vaginal discharge, pruritus vulvae, lower abdominal pain and pain on passing urine were recorded. A vaginal speculum was passed and after local examination the following specimens were taken.

- 1) A swab from the posterior fornix and wet smear preparation was made to find out trichomonas and 'clue cells' for H. Vaginalis and Candida was identified by potassium hydroxide (KOH) preparation under microscope.
- 2) Swab from the posterior fornix for culture of trichomonas in Diamond medium and candida in Sabouraud's medium.
- 3) Cervical and urethral swab for isolation of N. Gonorrhoea by Gram stain and culture in Chocolate agar plate.
- 4) An endo-cervical swab for detection of chlamydia (inclusion bodies detected in the cervical and vaginal epithelium by Giemsa stain).
- 5) Serological analysis - Serum samples were analysed for screening of Syphilis and AIDs by VDRL & ELISA tests.

Identification of organisms by culture :

*Gonococcus* - Swabs were inoculated in

the chocolate agar plate and incubation was done at 37°C x 24 hours under CO<sub>2</sub> atmosphere. The organisms were identified by oxidase agent and Gram stain.

*Trichomonas* - After incubation at 37°C in Diamond medium, it was observed daily for 7 days and bottom specimen was examined under microscope.

*Candida* - Specimen were inoculated in Sabouraud's medium and incubated at 37°C x 48 hours and colonies were confirmed by KOH and staining.

#### OBSERVATIONS

In our study, the prevalence of candidal infection was most common (19.2%). No cases of gonococcus and AIDS were noted (Table I). Maximum cases belonged to 20-29 years (range 15-39 years) (Table II). Table III shows the symptoms of different pathogens by direct questionnaire method. Pruritus vulvae (61.12%) and dysuria (27.77%) were more frequent in trichomonal infection than Candida and H. Vaginalis. Relationship of genital pathogens with Clinical lesion in the reproductive tract was also evaluated (Table IV).

#### DISCUSSION

In the present study the prevalence of trichomoniasis was 9.2% which is similar to the finding (4.7%) by Sparks et al (1975). In

Table I

Distribution of STD positive cases accoring the pathology (N = 250)

Type/Pathology	Trichomonas	Candida	H. Vaginalis	Chlamydia	Syphilis	Gonococcus	AIDS
Symptomatic	18	36	40	00	03	00	00
Asymptomatic	05	12	00	03	05	00	00
Total	23	48	40	03	08	00	00
Prevalence	9.2	19.2	16.0	1.2	3.2	00	00

**Table II**  
Distribution of STD positive cases in relation to age

Age in years	Trichomonas	Candida	H. Vaginalis	Syphilis
	No. %	No. %	No. %	No. %
15 - 19	02 (08.69)	09 (18.75)	08 (20.00)	02 (25.00)
20 - 24	08 (34.79)	14 (29.16)	12 (30.00)	03 (37.50)
25 - 29	07 (30.43)	15 (31.25)	12 (30.00)	02 (25.00)
30 - 34	04 (17.40)	05 (10.42)	04 (10.00)	01 (12.50)
35 - 39	02 (08.69)	05 (10.42)	04 (10.00)	—

**Table III**  
Frequency of symptoms of different STDs

Symptoms	Trichomonas	Candida	H. Vaginalis
	No. %	No. %	No. %
Vaginalis discharge	14 (77.77)	27 (75.00)	32 (90.00)
Pruritus Vulvae	11 (61.12)	11 (30.55)	10 (25.00)
Burning Micturition	05 (27.77)	04 (11.12)	05 (12.50)
Backache	03 (16.67)	06 (16.67)	—
Pain abdomen	05 (27.77)	03 (8.34)	—
Vulval swelling	02 (11.12)	—	—

**Table IV**

Frequency of signs

Signs	Trichomonas	Candida	H. Vaginalis
	No. %	No. %	No. %
Vaginalis discharge	20 (86.95)	32 (66.67)	37 (92.50)
Vaginitis	15 (65.22)	23 (47.92)	09 (22.50)
Cervicitis	10 (53.47)	14 (29.16)	08 (20.00)
Vulvitis	03 (13.04)	05 (10.42)	—

contrast, Kulkarni et al (1981) showed higher prevalence of 28.4%. In our study 78% were symptomatic of trichomonal positive cases (Table I) and 77.77% complained of abnormal vaginal discharge (Table III). Similarly the other pathogens candida and *H. Vaginalis* and appreciable relation with vaginal discharge (66.67% and 92.50%) and vaginitis (47.92% and 22.50%) seen on local examination (Table IV). In our series all the cases of *H. Vaginalis* were symptomatic and the prevalence of it (16%) was to some extent higher than the figure (7.1%) of Thin and Michael (1970).

The prevalence of candidal infection (19.2%) corresponds with the findings of Sparks et al (1975) and Clarks and Solomons (1959). In the present series 25% of *Candida* positive cases were asymptomatic (Table I). Symptomatic cases and dysuria (11.12%) along with vaginitis (47.92%) and Cervicitis (29.16%) (Table IV). Carrol et al (1973) reported the association of this pathogen with 84% cases of vaginitis, 30% of cervicitis and 10% of vaginal discharge. No case of gonococcal infection was noted in our study, but in most published studies it was between 0.2 - 0.6% (Sparks et al, 1975).

Ross et al (1981) and Goh et al (1982) isolated *C. Trachomatis* in 0% and 37.7% of cases respectively. But in our study the prevalence rate of this organism was very rate (1.2%) because diagnosis was based

mainly on identification of inclusion bodies by Giemsa stain, which was not a very sensitive method according to W. H. O. report (1986). The overall seropositivity by VDRL (3.2%) seen in this study was similar to that reported by Adeoba (1967), who showed the prevalence rate of 2.8%. Hajini et al (1975) showed a higher prevalence (8.5%) of seropositivity. VDRL and Reiter Protein Complement Fixation (RPCF) tests together give better sensitivity and specificity. Thirtysix percent of the total STD positive cases were traced at the time of delivery and no grossly affected babies were encountered at birth in our series.

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Recently an increase in the incidence of acute tubercle infection among pregnant women during the month, March-May 1988 was reported from Delhi (Kishore et al 1990). During the same period of the year many women with tubercle like illness attended the Naina Hospital, GIMER, Chandigarh, for medical advice. The serological finding of these patients is reported in this communication.

The paired serum samples were tested for tubercle haemagglutination inhibition (HAI) antibodies using bovine - MNCI to pregnant women. The test results were from pregnant women who were residing in a hostel in the GIMER Campus. Nine of them were student nurses who developed tubercle like illness during the period in April to 22 May, 1988. The other one was a research student living in the hostel. Paired sera were available only from 4 pregnant women.