STUDY OF INCIDENCE OF GONORRHOEA IN REPRODUCTIVE AGE GROUP WOMEN WITH LEUCORRHOEA ATTENDING STI CLINIC

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ABSTRACT

The object of our study is to know the incidence of gonorrhea in reproductive age group women suffering with leucorrhoea attending STI Clinic in King George Hospital in Visakhapatnam.

MATERIAL AND METHODS

In our present study, we included 120 female patients of reproductive age group women (20-45 years) with leucorrhoea attending STI Clinic; we also examined the male partners. The diagnosis of Gonorrhoea is confirmed by smear and culture examination. The vaginal discharge was collected with sterile swabs and inoculated in modified Thayer-Martin media for 48-72 hours. Gram staining was done to examine the smear under microscope to examine the diplococci. Urethral and rectal swabs collected from their male sexual partners and sent for smear and culture.

RESULTS

In our study, results shows women suffering with Gonococcal infection and some percent of male partners suffering with Gonococcal infection and it shows the transmission occurs predominantly through sexual contact are asymptomatic carriers and source of infection to their male partners. We found Gonorrhoea is the common cause of Leucorrhoea next to Candidiasis and Trichomoniasis.

CONCLUSION

Treatment of both male and female sexual partners is essential to control and prevent the recurrence of Gonorrhoea. Early diagnosis and treatment of Gonorrhoea in female patients will prevent late complications like PID, tubal block, ectopic pregnancy and sterility in reproductive age group women.

KEYWORDS

Leucorrhoea, Gonorrhoea.

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INTRODUCTION

Gonorrhoea is one of the most common sexually transmitted disease caused by *Neisseria gonococci*. It is a gram negative, non-motile, non-spore forming diplococcus. In female genital tract, the endo-cervix, fallopian tube and endometrium of uterine cavity are lined by columnar epithelium and more susceptible to gonococcal infection. In male patients, penile urethra is lined by columnar epithelium and gonococcal urethritis is more common.¹

Excessive abnormal vaginal discharge is called as Leucorrhoea and it is one of the most common complaint in female patients attending STI Clinics.

The common organisms causing Leucorrhoea are *Candida albicans*, *Trichomonas vaginalis* and *Gardnerella vaginalis*.²

The consistency and nature of discharge varies with organism. In Candidiasis the discharge is white, curdy in nature, associates with vaginal soreness, burning and itching. In Trichomoniasis the vaginal discharge is yellowish and frothy in nature with intensive vulval itching. In bacterial vaginosis the discharge is homogenous, sticky, offensive, fishy mal-odour. In gonorrhoea the discharge is greenish yellow, profuse and purulent in nature.

MATERIALS AND METHODS

In our present study, we included 120 female patients attending STI Clinic of reproductive age group (20-45), who lead active sexual life. We excluded women below 20 years and above 45 years. We also included male sex partners of female patients to know the source of infection and route of transmission. We screened all the patients by doing HIV and VDRL tests. Discharge samples were taken with sterile swabs from endo-cervix, rectum, urethra and oropharynx Lab.

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DIAGNOSIS

The collected swabs transported to the micro labs in Stuart's medium and inoculated in Modified Thayer-Martin medium for 48-72 hours. Modified Thayer Martin medium contains Vancomycin, Trimethoprim and Nystatin to inhibit the growth of other contaminated bacteria and fungus.³ After 48 hours of inoculation pink color colonies appear in culture media identified by doing oxidase test, which turn pink color to dark blue color. The smear was taken on glass slide, fixed and dried and stained with gram staining. Examination of smear under oil immersion bean shaped intracellular diplococci observed.^{3,4} Other tests like gonococcal complement fixation and ELISA tests were not done due to unavailability in our lab. We have done KOH and saline wet mount to exclude candida and trichomonal infections.

OBSERVATION AND RESULTS

In our present study, 120 female patients with leucorrhoea attending STI Clinic were taken. According to their marital status 108(90%) patients were married, 8(6.66%) patients unmarried and 4(3.33%) patients were commercial sex workers. {Table-1}. In our study, we have taken 120 female patients of reproductive age group. We excluded patients below 20 years and above 45 years. {Table-2} shows majority of patients 32% belonged to 25-30 years age group. Only 8% of patients come under 40-45 years age group. Culture and smear examination were done for all 120 female patients and their male sexual partners. Out of 120 female patients, 22.5% were gonococcal smear positive and 17.5% were positive for

gonococcal culture. Out of 120 male partners, 32% were gonococcal smear positive and 22.5% gonococcal culture positive {Table-3}. {Table 4} shows 32.5% of female patients were smear positive for KOH mount (Candidiasis), 26.5% of female patients showed positive for wet mount (Trichomoniasis), 22.5% of patients were positive for Gonococcal infection, others were non-specific (18.3%). Out of 120 female patients, we found 8(6.6%) were VDRL reactive and 3(2.5%) were HIV seropositive. Out of 120 male partners, we found 14(11.6%) were VDRL reactive and 5(4.1%) were HIV seropositive.

Marital Status	No. of Patients	Percentage
Married	108	90%
Unmarried	8	6.66%
Commercial Sex Workers	4	3.33%
Total	120	100%

Table 1: Distribution of patients according to marital status of patients

Age Group	No. of Patients	Percentage
20-25 yrs.	33	27.5%
25-30 yrs.	38	32%
30-35 yrs.	24	20%
35-40 yrs.	15	12.5%
40-45 yrs.	10	8%

Table 2: Distribution of patients according to Age

Sex of Patients	Total Number	Gonococcal Smear Positive	Percentage %	Gonococcal Culture Positive	Percentage %
Female Patients	120	27	22.5%	21	17.5%
Male Partners	120	38	32%	27	22.5%

Table 3: Lab diagnosis of Gonococcal infection in women and their male sexual partners

Infection	No. of Patients	Percentage
Candidiasis (KOH Mount)	39	32.5%
Gonococcal infection	27	22.5%
Trichomonas (Wet Mount)	31	26.7%
Non-specific	23	18.3%
Total	120	100%

Table 4: Etiopathogenesis of Leucorrhoea

Sex of Patients	Total Patients	Sero Positive for VDRL%		Sero Positive for HIV%	
Female patients	120	8	6.6%	3	2.5%
Male partners	120	14	11.6%	5	4.1%

Table 5: Screening for associated infections syphilis and HIV

DISCUSSION

Gonorrhoea is one of the most common STI infection that can cause leucorrhoea in female patients. In our study, we found incidence of Gonorrhoea in 22.5% of the female patients with reference to other studies at the rate of 28% and 32% incidence.^{5,6} In screening of male sexual partners, we found 32% were gonococcal smear positive indicates female patients acquire infection from their male sexual partners. In our study according to etiopathogenesis, we found 32.5% of female patients with leucorrhoea was due to Candidiasis and 26.7% patients with Trichomoniasis and 22.5% due to Gonorrhoea.

It indicates next to Candidiasis and Trichomoniasis, Gonococcal infection found to be the third common cause of leucorrhoea in reproductive age group of women.^{5,7} According to age-wise distribution, higher incidence of gonorrhea found in 20-30 years of age group which is sexually active age group. In our study, we found lower incidence found after 45 years. We screened male and female sexual partners for association infections like syphilis and HIV and 2.5% female patients and 4.1% of their male sexual partners are HIV reactive shows that leucorrhoea may enhance the risk of HIV transmission.

Treatment and Follow-Up

The confirmed cases of Gonorrhoea were treated with single dose of tab. Cefixime 400mg orally or tab. Ofloxacin 400mg single dose orally. Simultaneously, the male sexual partners of female patients were also given the same treatment. We follow up the patients for a period of 3 to 6 months. Those patients with persistent symptoms, we treat them for mixed infections with tab. Azithromycin 1gm orally and tab. Metronidazole 2gm single dose.

CONCLUSION

Gonococcal infection is one of the most common cause of leucorrhoea in reproductive age group.

Male sexual partners are found to be common source of infection in female patients, so simultaneous treatment of both female and male sexual partners is essential to prevent recurrence and recycling of infection. Early diagnosis and treatment of Gonorrhoea in female patients of reproductive age group women may prevent late complications like tubal block, sterility and ectopic pregnancy.

REFERENCES

1. Gonorrhoea in males. In: King A, Nicol C, Rodin Peds. Venereal diseases. 4th edn. London: ELBS; 1980.p.200-213.
2. Thin RN, Shav EJ. Diagnosis of gonorrhoea in women. Br J Vener Dis 1979;55:10-13.
3. Gonorrhoea. In: Dyck EV, Meheus AZ, Piot P, eds. Laboratory diagnosis of sexually transmitted diseases. Geneva: WHO; 1999. p.1-21.
4. Hook EW, Homes KK. Gonococcal infection. Ann Intern Med 1985;102:229-243.
5. Adler MW, Belsey EM, Rogers JS. Sexually transmitted diseases in a defined population. Br Med J 1981;283:29-32. 6.
6. Bhattacharyya MN, Jephcott AE, Morton RS. Diagnosis of gonorrhoea in women: comparison of sampling sites. Br Med J 1973;2:748-50. 5.
7. Turner CF, Rogers SM, Miller HG, Gribble JN, et al. Untreated gonococcal and chlamydial infections in a probability sample of adults. JAMA 2002;287:726-733.