

Microbiological Study of Male's Urethral Discharge

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Abstract

Objective: To evaluate male patients complaining of urethritis clinically according to the isolated organisms.

Method: A total of 100 male patients attending to of Dermatological and Venereal private clinics for the period April 2003 to November 2003 were included in the study. Urethral swab was obtained from each male for culture and direct immunofluorescence examination was done. Demographic data was obtained, also.

Results: *N. gonorrhoea* was the predominate cause of infection in 22%. A peak of infection was reported in the

second decade of age. Highest rate reported among single males. A significant association was noticed between profuse discharge and infection with gonorrhoea.

Conclusion: This study demonstrated that peak of infection in the second decade of age and among singles. A broad range of causative agents was reported.

Key words: Gonorrhoea, urethral discharge, non gonococcal urethral discharge

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Introduction

Sexually transmitted diseases (STDs) are communicable diseases that are mainly transmitted through sexual intercourse with an infected person⁽¹⁾. STDs caused by a number of microorganisms, they produce a set pattern of signs and symptoms, such as urethral discharge, acute swelling of the scrotum in men and enlarged glands in the groin⁽²⁾. Common STDs are gonorrhoea, syphilis, chancroid and non – gonococcal urethritis, hepatitis B, herpes simplex, human papilloma virus and AIDS⁽³⁾. The incidence of acute Sexually transmitted infections (STI) is believed to be high in many countries and failure to diagnosis and treat STI at an early stage may result in serious complications and sequelae ,including infertility ,foetal wastage ,ectopic pregnancy ,anogenital cancer and premature death ,as well as neonatal infections⁽¹⁾. This study was carried out to identify the bacterial cause of urethral discharge.

Methods

A total of 100 males complaining of urethral discharge attending to Dermatological and Venereal private clinics were included in this study. Urethral swab and urine samples were taken from each male as described by other workers^(4 - 6). Smears were prepared from urethral discharge and urine sediment for direct microscopic examination. General urine analysis was done for each sample.

Culture was held on four media Chocolate agar (Mast), blood agar (Mast), MacConkey agar (Mast) and Thayer Martin agar (Mast). Direct immunofluorescence and Giemsa staining were done for urethral smears as described⁽⁷⁾. Biochemically, oxidase test and API system (Bio Merieux) were carried out as described⁽⁸⁾.

Informations were collected from each patient by direct interview. Data requested included age, marital status, occupation, previous diseases, present illness as (urethral discharge and dysuria), nature of discharge, and antibiotic uses.

Chi-square test was used to examination the association between variables.

Results

Neisseria. gonorrhoeae was the predominate cause of infection in 22%, *Chlamydia trachomatis*, *Staph. Epidermis*, *Staph. aureus* and *Diphtheroids* were constitute 20%, 16%, 12% and 9%, respectively. *G. vaginalis* , *E.coli* , *T . vaginalis* , *Strept. agalactia*, α -*Streptococcus 4* and *C .albicans*, were detected in rates of 5%, 5%, 4%, 3%, 2%, and 2%, respectively. This finding is shown in (Table-1).

Figure-1 shows the age distribution of the studied males with urethral discharge. A peak was noticed at 20 years of age followed by a gradual decline in rates of men with urethral discharge.

High rate of urethral discharge was noticed among singles while the least was among divorced men (Table- 2).

Out of 63 patients with profuse urethral discharge there were 53 (84.1%) patients had gonococcal infection. A significant association was noticed between profuse urethral discharge with gonococcal infection ($p < 0.05$) (Table- 3).

Discussion

Sexually transmitted diseases (STDs) are infectious diseases of major public health importance. Their prevalence throughout the world is high⁽⁹⁾. This study revealed that *N. gonorrhoea* and *C. trachomatis*

are higher than that reported previously in Baghdad by Al –Delaimy ⁽¹⁰⁾ who reported that (19.5%) and (18.5%), respectively. It is higher than that reported by Khalil ⁽¹¹⁾, also, who reported rates of (39.57%) and (37.04%) for *N. gonorrhoea* and *C. trachomatis*, respectively. In Egypt Mostafa and Roshdy ⁽¹²⁾ reported a lower rate (14.8%) for *N. gonorrhoea*. This difference may attributed to fact that a high sensitive laboratory method (immunoflourscence) was used in this study .

The finding that several microbiological agent were associated with uretheritis other than gonococcus (*G. vaginalis* , *T . vaginalis* , *C .albicans* ,*Staph. Epidermis*, *Staph. aureus*, *Diphtheroids*, *E.coli*, *Strept.agalactia*, and α - *Streptococcus*) may attributed to the high sensitive methods (bacteriological and biochemical) used in the diagnosis of microbes.

Al –Delaimy ⁽¹⁰⁾ and Khalil ⁽¹¹⁾ reported different agent associated with uretheritis.

The study showed a peak of infected patient was at age 20-29 years. It is consistent with other studies ⁽¹⁰⁻¹²⁾. This may be due to the high sexually activity in this age ^(13,14).

The singles were predominately infected patients. It is due easily consultation for single patients. It is consistent with another study ⁽¹⁵⁾. It may be attributed to social factors.

The finding that profuse urethral discharge with pus cells was significantly predominating in gonococcus urethritis is consistent with that of Gina et al ⁽¹⁶⁾. Several workers demonstrated that gonococcus infection association with profuse discharge and pus cells ^(17,18).

Table (1)
Distributed of Isolated Bacteria from Male Patients

| Microorganisms | Urethritis | |
|---------------------------------|------------|-----|
| | No. | % |
| <i>N. gonorrhoeae</i> | 22 | 22 |
| <i>C . trachomatis</i> | 20 | 20 |
| <i>Staph. epidermidis</i> | 16 | 16 |
| <i>Staph. aureus</i> | 12 | 12 |
| <i>Diphtheroids</i> | 9 | 9 |
| <i>G. vaginalis</i> | 5 | 5 |
| <i>E.coli</i> | 5 | 5 |
| <i>T. vaginalis</i> | 4 | 4 |
| <i>Strept.agalactia</i> | 3 | 3 |
| α - <i>Streptococcus</i> | 2 | 2 |
| <i>C. albicans</i> | 2 | 2 |
| Total | 100 | 100 |

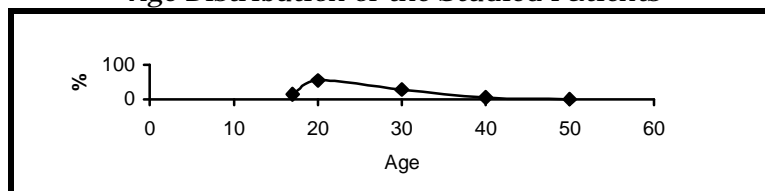
(Table 2)
Distribution of male patients according to marital status

| Social status | Male patients | |
|---------------|---------------|-----|
| | No. | % |
| Single | 47 | 47 |
| Married | 43 | 43 |
| Divorced | 10 | 10 |
| Total | 100 | 100 |

(Table- 3)
Distribution of male patients according to character of urethral discharge

| Clinical signs | Total No. | | | | |
|---|-----------|----|------|----|------|
| Patients with out urethral discharge | 10 | 10 | 13.6 | - | 0.0 |
| Patients with scanty urethral discharge | 20 | 10 | 13.6 | 8 | 12.6 |
| Patients with profuse urethral discharge with pus | 70 | 53 | 72.6 | 55 | 87.3 |
| Total | 100 | 73 | 73 | 63 | 63 |

(Figure- 1)
Age Distribution of the Studied Patients



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