

## SUMMARY AND CONCLUSION

This study was carried on 72 patients attending the Skin and Venereal Outpatient Clinic in Communicable Diseases Research and Training Center (CDRT) of Faculty of Medicine Suez-Canal University and some private Venereal Clinics in Suez through 10 months starting from October 1992 to August 1993. Their age ranged from 28 to 58 years and they complaining from urinary, sexual or infertility problems. These patients were clinically diagnosed as chronic prostatitis and they were subjected to the following:

- A- Urethral swabbing for:
  - I. Detection of *C.trachomatis* antigen in the first 61 cases by the following methods:
    - 1) Direct immunofluorescent (DIMF).
    - 2) Dot enzyme linked immunosorbent assay (Dot ELISA).
    - 3) Tissue culture on Buffalo green monkey (BGM) cell line.
    - 4) Enzyme linked immunosorbent assay (ELISA) on tissue culture.
  - II. Culturing the urethral samples on Mueller Hinton and chocolate agar plates which were anaerobically incubated in candle jar for 48 hours at 37°C for isolation of *N.gonorrhea* if present.

- III. Detection of *U.urealyticum* by culturing the urethral samples on ureaplasma agar plates and broth tubes. The cultured plates were anaerobically incubated in candle jar at 37°C up to 8 days, while the cultured broth tubes were aerobically incubated at 37°C for 2-5 days.
- B- Prostatic massage for isolation and identification of different microbial agents in cases of chronic prostatitis. The expressed prostatic secretions were subjected to the following:
- I. Microscopic examination of:
- 1) Fresh smear for pus cells, RBCs and parasites.
  - 2) Stained slides with Gram and Ziehl-Neelson stains.
- II. Direct detection of *C.trachomatis* antigen in the first 61 cases by DIMF test.
- III. Culture on blood, MacConkey, chocolate, Mueller Hinton and Sabaraud's agar plates. The cultured plates were incubated according to the requirements of the different suspected organisms.
- IV. Detection of *M.hominis* was carried out by culturing the samples on mycoplasma agar plates and broth tubes. The cultured plates were anaerobically incubated in candle jar at 37°C up to 8 days, while the cultured broth tubes were aerobically incubated at 37°C for 2-5 days.
- The isolated mycoplasmas were identified and serologically classified by growth inhibition test.

The results of the present study showed that:

- 53 cases (73.6%) out of 72 were suffering from urinary symptoms, 51 cases (70.8%) had sexual symptoms and 17 (23.6%) were infertile.
- No bacteria were isolated from the urethra.
- Out of 72 cultured expressed prostatic secretions 28 samples gave bacterial growth within 48 hours. So, the incidence of chronic bacterial prostatitis in this study was 38.9%. Out of these 28 samples; 20 (71.4%) were found to be Gram positive cocci, 6 (21.4%) Gram negative bacilli and 2 cases (7.1%) had both.

Out of these 22 Gram positive cocci cases: *Staph.epidermidis*, *Staph.aureus* and *Strept.fecalis* were detected in 16 (72.7%), 2 (9.1%) and 4 (18.2%) cases respectively. Out of 8 Gram negative bacilli cases: *Klebsiella pneumoniae*, *E.coli* and *Proteus mirabilis* were detected in 2 (25%), 4 (50%) and 2 (25%) cases respectively.

In this study it was found that the chronic bacterial prostatitis was independent on the presence of urinary and/or sexual symptoms and the number of pus cells in the expressed prostatic secretions of these patients was more higher than their number in nonbacterial cases.

As regards the effect of chronic bacterial prostatitis on fertility, in this study it was found that this type of infection had no effect on fertility.

- Out of 72 cases 1 case only (1.4%) had prostatic candida infection.
- Out of 72 cases under this study, 31 (43.1%) had urethral *U.urealyticum*, 48 (66.6%) had prostatic *M.hominis* and 20 cases (27.8%) had combined infection with both. Urethral *U.urealyticum* and prostatic *M.hominis*.
- All the isolated prostatic mycoplasmas were *M.hominis*.

In this study it was found that the urethral *U.urealyticum* and prostatic *M.hominis* infections were independent on the presence of urinary and/or sexual symptoms. Also, the number of pus cells in the expressed prostatic secretions of these patients was independent on the presence or absence of prostatic mycoplasmal infection.

As regards the role of genital mycoplasmal infection on fertility, in this study it was found that the urethral *U.urealyticum* and prostatic *M.hominis* had no effect on fertility.

- Mixed prostatic infection by bacteria and *M.hominis* was detected in 18 (25%) out of 72 studied cases, in which *Staph.epidermidis* was the most common isolated bacteria.
- Out of 61 cases; 25 (41%) had urethral *C.trachomatis*; 16(64%) cases out of these 25 had also prostatic chlamydial infection as diagnosed by the DIMF test done on their urethral swabs and the expressed prostatic secretions. No cases were detected to have chlamydial prostatitis without having chlamydial urethritis.

In this study it was found that the urethral and prostatic chlamydial infections were independent on the presence of urinary and/or sexual symptoms and the number of pus cells in the expressed prostatic secretions of chlamydial cases was independent on this type of prostatic infection. Also, it was found that chlamydial urethritis and prostatitis had no effect on fertility.

- The tissue culture of the collected urethral samples on the BGM cell line which was done on two setting; the first set included 44 selected samples (25 positive and 19 negative chlamydial cases as diagnosed previously by DIMF test), collected and stored 8 months age at  $-70^{\circ}\text{C}$  gave negative results, while the second set of some recently collected samples along one month before culture gave positive and negative results which was coincided with the results of DIMF test done on the same samples. The negative results of the first set tissue culture may be due to the prolonged storage of samples (8 months at  $-70^{\circ}\text{C}$ ). So, under certain circumstances the DIMF test and tissue culture were equal in sensitivity and specificity (100%).
- In this study both dot ELISA and ELISA tests gave negative results, it may be due to the prolonged storage of samples (8 months at  $-70^{\circ}\text{C}$ ).

From this study it could be concluded that the DIMF test is the best method used for detection of chlamydial antigen. For diagnosis of chlamydial urethritis the sensitivity and specificity of DIMF test were 100% and 80% respectively.

While in chlamydial prostatitis they were 64% and 100% respectively.

So, we recommended the use of freshly collected urethral samples (collected and stored up to one month at -70°C) for detection of *C.trachomatis* antigen by dot ELISA, tissue culture and ELISA methods.

- Urethral infection by *U.urealyticum* and *C.trachomatis* was detected in 14 (22.9%) out of 61 cases.
- Prostatic infection by bacteria and *C.trachomatis* was detected in 9 (14.75%) out of 61 cases, in which *Staph.epidermidis* was the most common isolated bacteria. While, prostatic infection by *M.hominis* and *C.trachomatis* was detected in 15 (24.5%) out of 61 cases.