ASSESSMENT OF THE AETIOLOGICAL FACTORS OF NON-SPECIFIC (NON GONOCOCCAL) URETHRITIS, TAKING BURNING MICTURITION AS CRITERIA

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Out of 90 cases of non-specific urethritis investigated, aetiological factors could be found in 58 cases. However , in 45 cases i.e., 50%, the causative factors turned out to be common factors like pyogenic, gonococcal, fungal, and trichomonal infections only.

Key Words: Non-specific urethritis, Gonococci, Trichomoniasis, spina bifida, prostatitis

Introduction

The terms non-specific urethritis connotes urethritis not caused by the commonest aetiological agent i.e., *Neisseria gonorrhoea.* Many aetiological factors are incriminated in the causation of the same and some of them are trichomoniasis, moniliasis, chlamydia, mycoplasma, allergy and many pyogenic bacteria.[1,2] In the present work, we have investigated some of these factors that lead to the causation of this condition.

Materials and Methods

The clinical material for the work was obtained form the Department of S.T.D. Kurnool Medical College, Kurnool. In all cases detailed history was taken. The criteria for the selection of the cases were 1. Burning micturition of more than 2 months duration 2. No discharge from urethra even on milking. The cases thus selected were subjected to 1. Complete urinalysis 2. Urine culture.

3. Prostatic massage was done in 70 cases and the discharge was subjected to (a) routine microscopic examinations (b) Search was made for i. Gonococci by Gram's stain ii. for *Trichomonas vaginalis* by wet smear iii. fungal elements by 10% KOH preparation. (c) The discharge was cultured for gonococci and pyogenic group of organisms. 4. Blood V.D.R.L. test was done in all 90 cases. 5. X-ray survey was done in 10 cases 5. Urethroscopic examination was done in 10 cases.

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Observation and Results

Majority (60) of the patients belonged to the age group 20 to30 and duration of disease ranged from 2 months to 7 years. Burning micturition was present in all 90 cases, while 1 patient had burning with itching. Morning gleet was noticed in 8 cases and in 4 stained smears showed intracellular gonococci. Incubation period could be assessed by interrogation in 33 cases. In 18 patients it ranged from 1-10 days, in 3 cases it ranged from 11-20 days, in 6 patients, from 20-30 days, in 3 cases, from 30-60 days while in 3 others it ranged from 60-120 days.

Figure. 1. Spine bifida

Urinalysis revealed pus cells above 5 in 55 cases. Out of 47 cases in whom pyogenic organism could be cultured, 23 grew coagulase negative -staphylococci, 19 grew coagulase positive staphylococci, 3 grew atypical coliforms and 2 grew klebsiela. As regards culture and sensitivity it is given in Table 11.

Table I. Urine culture : The organisms and number of instances it was sensitive. Cases done : 82 - Positive in 11

Organism	Kan	Gen	N.A.	Led.	oxt.	Fur.	Chlor	strep.	No. of cases
Klebsiela	1	1	2	1	1				2
Alkalagens faecalis.	1	1							1
Atypical coliform	3	2	3	1		1	1		3
E.coli	3	2	2		1	1			3
Pseudomonas		2						1	2
Total:									11

Kan = Kanamycin Gen = Gentamicin, N.A. =Nalidixcacid
Led = Ledermycin Oxt = Oxytetracycline Fur = Furadantine
Chlor = Chloromycetin Strep = Streptomycin.

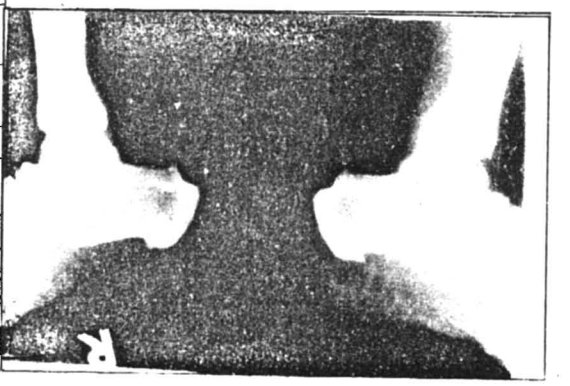

Figure. 2. Calcanean Spur in a case of Reiters Disease

cases. Albumin was found in 2 and sugar in 3 cases. Two of them were diabetic. R.B.C. was found in 3 cases and in 9 cases epithelial cells were found. Threads were seen in 4, sperms in 2 and casts and crystals in 1 case each.

Urine culture was done in 82 cases and pyogenic organisms were cultured in 11 cases. Klebsiela and pseudomonas were cultured in 2 patients each. Atypical coliforms and E.coli were cultured in 3 cases each. In 1 case *Alkalagenes faecalis* was cultured. As regards culture and sensitivity it is given in table I. Blood VDRL test was reactive 1:4 in 4 patients.

Prostatic secretions revealed puscelis in 26 cases, epithelial cells in 4, R.B.C. in 1, bacteria in 3 cases (non gonococcal), fungal filaments in 1 and *Trichomonas vaginalis* in 1 case. Dead sperms were found by staining in 5 cases, but gonococcal culture done in 28 cases was negative in all. Pyogenic culture was done in 67 cases and was positive in 47. Aerobic spores were cultured in 1 case.

Other features observed were benign prostatic hypertrophy in 1, cancer of prostate in one, and spermatorrhoea in 2. X-ray study revealed arthritis in 3 cases and 2 had calcanean spur (fig.2). Ankle joints and wrist joints were involved in 1 of these cases. These three cases were classified as Reiter's disease. Cervical spondylosis was seen in 1 case. Spina bifida with osteoporosis of right lumbar spine and fusion of L5 and 1 were found in 1 case (fig.1).

Table II. Culture of Pyogenic organisms from prostatic fluid
The organism and the no. of instances it was sensitive
No. of cases done = 70 **positive = 47 cases.**

Organism	Strep.	Chlor.	Led.	Ery.	Kan	Sep.	Amp.	Oxt.	Gen.	Ceph	Pen	No.of cases
Coag. negative Staph.	18	7	3	15	7	2	3	3			1	23
Coag. positive Staph.	08	9	6	10	10	9	2		2	1		19
Atypical coliform		2			3	1	1		1			03
Klebsiela	1				1	1		1				02
	Total											47

Strep = Streptomycin Chlor = Chlormycetin Led = Ledermycin
Ery = Erythromycin Ken = Kenamycin Sep = Septran Amp = Ampicillin
Oxt = Oxytetracycline Gen = Gentamicin, Ceph = Cephalexin

Urethroscopic examination showed posterior urethritis with stricture in 1 case, pin hole meatus in 1 case, bladder neck congestion and prominent verrumontanum in 1 case.

Table III. Causes of NSU

Causative factor	No
Coag negative staphylococci	18
Coag positive staphylococci	14
Atypical coliforms	03
Klebsiela	02
Fungus	01
Trichomoniasis	01
Lower urinary tract infection by Klebsiela	01
Chronic gonorrhoea	05
Reiters	03
Spina bifida	01
Diabetes	02
Impotence with spermatorrhoea	02
Cancer prostate	01
Benign prostatic hypertrophy	01
Stricture urethra	01
Pinhole meatus	01
Bladder neck congestion with prominent verrumontanum	01
Total	**52**

After correlating and analysing all the observations, following results are obtained.

1. Though staphylococci, coag. negative and positive were isolated in 42 cases, in 10 cases other conditions were discovered and hence the primary infection of prostate by staphylococci was thought to be the cause in 32 cases only.

2. Though urine culture was positive in 11 cases, only in 1 atypical coliforms were cultured from both urine and prostatic fluid and this finding alone was considered significant. In another case Klebsiela was cultured from urine alone. This was considered as infection of lower urinary tract. In the rest of the 9 cases urine culture positivity was thought of as due to contaminants. In addition, atypical coliforms were cultured in 3 cases and Klebsicla in 2 cases in prostatic fluid. These 5 cases were considered as primary prostatic infection by the above mentioned organisms.

3. Fungus was isolated from prostatic fluid in 1 case and another turned out to be trichomonal infection.

Gonococci were found in gleet in 4 cases and in an another it was found in prostatic fluid. Hence chronic gonococcal infection was considered as the diagnosis in these 5.

5. Other diseases found with their numbers are Reiters-3, spina bifidal-1, diabetes-2, spermatorrhoea with impotence-2, cancer prostate-1, benign prostatic hypertrophy -1 and structural abnormalities-3. Though in some of these cases, urine culture or culture of prostatic flluid came positive, they were not given any significance as they were considered as secondary invaders.

6. Thus we could find the cause of non-specific (non-gonococcal) urethritis in 58 out of 90 (64%) patients.

The disease wise distribution as found in this work is given in Table-111.

Discussion

The present work proved that the commonest cause of chronic dysurea or burning micturition was only due to common infections like pyogenic, chronic gonococcal, protozoal and mycotic infections, as 45 out of 90 cases (50%) came under this category only. In another 13 cases, the picture was different. In 5 of them urinary obstructive pathology like stricture, pinhole meatus, prominent verrumontanum, prostatic hypertrophy and cancer were found. Evidently the dysurea is the result of pathology or secondary invasion in three cases Reiter's disease was the aetiological factor. Spina bifida as observed in one of our patients is known to produce incontinance and lead to secondary invasion and consequent dysurea.

As regards diabetes and spermatorrhoea, the dysurea is thought to be due to defect in neurological mechanism leading to secondary infection.

In the present stady, we could find the cause of non-specific (non-gonococcal) urethritis in 58 out of 90 cases. In the rest of the cases other causes alrready documented like chlamydia, mycoplasma, virus or allery might have played part.[1-3]

References

1. King A, Nicol C, Rodin P. Venereal Diseases, 4th edn., ELBS, 1980, 274-293.

2.Willcox RR. Textbook of Venereal Diseases and Treponematoses, London, William Heinmann Medical Books Ltd, 1964; 88-110.

3. Sehgal VN : Textbook of Venereal Diseases. Vikas Publishing House Pvt.Ltd., 27-30.