T-STRAIN MYCOPLASMA IN NON-GONOCOCCAL URETHRITIS*
PATHOGEN OR COMMENSAL?

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The term “T-strain” was applied by Shepard (1954) to a strain of mycoplasma which, when cultured on solid agar, shows morphological differences from other members of the species (Shepard, 1956). Shepard (1954) recovered T-strain mycoplasmas from urethral scrapings taken from cases of non-gonococcal urethritis (NGU) and later found that this organism was present in some 70 per cent. of such cases (Shepard, 1956, 1959). Subsequently he postulated that T-strain mycoplasma was responsible for a specific type of venereal urethritis in which the incubation period was about 4 weeks with a range of 3 to 5 weeks; the symptoms were urethral itching, dysuria, and frequency of micturition, and the discharge was usually mucopurulent in character and scanty to moderate in amount (Shepard, Alexander, Lunceford, and Campbell, 1964).

Support for this view was supplied by Ford and his associates. In their initial study these workers recovered T-strain mycoplasmas from 60 per cent. of 45 cases of NGU (Ford, Rasmussen, and Minkin, 1962). Later they isolated the organism in 79 per cent. of 100 cases of NGU (Ford and Duvernet, 1963). In both studies T-strain mycoplasmas were recovered from the genito-urinary tract of normal men but significantly less frequently than from men suffering from NGU.

After a comprehensive study, Csonka, Williams, and Corse (1966) were unable to support the hypothesis that T-strain mycoplasma produced a specific type of urethritis, but they did agree that this organism could be of aetiological significance in NGU. They isolated T-strain mycoplasmas from 70 per cent. of 101 cases of NGU and from 76-9 per cent. of thirteen cases of gonorrhoea in which post-gonococcal urethritis had developed, but from only 28 per cent. of fifty male cases of uncomplicated gonorrhoea, and from 12-5 per cent. of 95 normal males. They found also that T-strain mycoplasmas were present in 61 per cent. of 21 female contacts of men suffering from NGU but in only 40 per cent. of normal women. Csonka and others (1966) noted that cases of NGU in which T-strain mycoplasmas had been isolated responded better to treatment with tetracycline than cases in which the organism was not recovered; they regarded this as additional evidence of relationship between the T-strain mycoplasma and NGU.

On the other hand, Ingham, Macfarlane, Hale, Selkon, and Codd (1966) and Black and Rasmussen (1968) were unable to support the hypothesis that T-strain mycoplasmas are of aetiological significance in NGU. Ingham and others (1966) isolated the organism from 60 per cent. of 45 cases of NGU, from 61 per cent. of 36 male cases of gonorrhoea, and from 48 per cent. of normal males. Black and Rasmussen (1968) recovered the organism from 46-6 per cent. of 56 patients with NGU, from 35 per cent. of sixty patients with gonorrhoea, and from 54-3 per cent. of 46 healthy contacts of the latter.

The purpose of this paper is to report the incidence of isolation of T-strain mycoplasma in the cases of patients under our care and to discuss the possible role of the organism in the light of these findings.

Clinical Material

There were 841 males and 211 females.

Among the males there were 314 cases of NGU and 404 cases of gonorrhoea; 123 men presented no evidence of disease of the lower genito-urinary tract and were used as controls.

Among the females there were 72 cases of gonorrhoea and 48 of trichomonal vaginitis; 91 females presented no evidence of disease of the lower genito-urinary tract.

Of these female patients 86 were consorts of males included in this investigation (55 of men with gonorrhoea and 31 of men with NGU).

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Method

 Cultures for the T-strain mycoplasma were prepared at the initial examination in every case and were repeated after treatment in 210 male cases (100 with gonorrhoea and 110 with NGU). In all but 291 male cases the method of collecting specimens from the urethra for culture was as described by Csonka and others (1966), and the culture medium was that used by these workers after March, 1965 (Method 1). The same culture medium was used in the female cases, but here a sterile cotton-wool swab, and not a platinum wire loop, was used to obtain a specimen from the cervix.

In 291 males (135 with NGU and 156 with gonorrhoea), the urethral specimen was collected on a sterile cotton wool swab, cultured in the liquid medium,* and sub-cultured, if there was any colour change, on the solid medium** of the Clinical Research Centre of the Common Cold Research Unit and also on the solid medium used in the other cases (Method 2).

Liquid Medium for T-strains*

70 ml. PPLO broth
1 ml. penicillin G, 100,000 units (final concentration 1,000 units/ml)
1 ml. thallium acetate 2·5 per cent. (final concentration 0·05 per cent. i.e. 1:2000)
1 ml. urea 10 per cent. (final concentration 0·1 per cent.)
10 ml. yeast extract 25 per cent.
20 ml. horse serum
2 ml. phenol red 0·1 per cent. (final concentration 0·002 per cent.)
pH adjusted to 7.

Solid Medium for T-strains**

70 ml. 6·0 agar-broth
0·4 ml. N.H.C.L.
1 ml. penicillin G, 100,000 units
1 ml. thallium acetate 2·5 per cent.
10 ml. yeast extract 25 per cent.
20 ml. horse serum
1 ml. urea 10 per cent.
2 ml. phenol red 0·1 per cent.
pH 6·5.

With both methods the colonies were studied after staining with alcoholic methylene blue, as described by Deines (1939).

Urease Inhibition Using the methods of Purcell, Taylor-Robinson, Wong and Chanock (1966), sera collected at the initial examination from 64 T-strain positive cases (38 males and 26 females) were tested against two strains of T-strain mycoplasma isolated during this investigation.

Cold Agglutinins In 88 T-strain positive cases (63 males and 25 females) sera were examined for cold agglutinins.

Results

Tables I and II show the rates of isolation of T-strain mycoplasma in the various categories of male and female patients listed above.

### Table I

<table>
<thead>
<tr>
<th>Diagnosis</th>
<th>No. of Cases</th>
<th>T-strain Positive</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>No.</td>
<td>Per cent.</td>
</tr>
<tr>
<td>Gonorrhoea</td>
<td>248</td>
<td>120</td>
</tr>
<tr>
<td>NGU</td>
<td>179</td>
<td>95</td>
</tr>
<tr>
<td>Control</td>
<td>123</td>
<td>50</td>
</tr>
</tbody>
</table>

### Table II

<table>
<thead>
<tr>
<th>Diagnosis</th>
<th>No. of Cases</th>
<th>T-strain Positive</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>No.</td>
<td>Per cent.</td>
</tr>
<tr>
<td>Gonorrhoea</td>
<td>72</td>
<td>37</td>
</tr>
<tr>
<td>Trichomonal vaginitis</td>
<td>48</td>
<td>23</td>
</tr>
<tr>
<td>Control</td>
<td>91</td>
<td>39</td>
</tr>
</tbody>
</table>

Sensitivity of Tests

It will have been noted that a higher percentage of positive results was obtained with Method 2 than with Method 1. To check the sensitivity of Method 2, cultures were taken 3 days after penicillin treatment in 100 male cases of gonorrhoea, and negative results were obtained in twelve (19·3 per cent.) of the 62 cases in which T-strain mycoplasmas had been isolated before treatment. On the other hand, T-strain mycoplasmas were recovered after treatment in nine (23·6 per cent.) of the 38 cases in which the organism had not been found initially.

Post-gonococcal Urethritis This may manifest itself in one of two ways:

(A) Signs of urethritis persist for longer than 7 days despite successful treatment of the gonococcal infection as shown by repeated failure to isolate the gonococcus in films or cultures.

(B) Within a few days of treatment being given for gonorrhoea the signs of urethritis disappear but then recur after a varying period, usually about 3
T-STRAIN MYCOPLASMA IN NGU

weeks; failure to demonstrate the gonococcus microscopically or by culture shows that the urethritis is not due to this organism.

Cases of post-gonococcal urethritis were encountered in this study as follows:

Method 1 121 male cases of gonorrhoea were under observation for longer than 3 weeks and eight cases developed post-gonococcal urethritis. Four of these had been T-strain positive initially, out of 65 T-strain positive cases followed.

Method 2 81 cases were followed for longer than 3 weeks and post-gonococcal urethritis developed in five of them; three of these had been T-strain positive before treatment out of 44 T-strain positive cases followed.

Non-gonococcal Urethritis

(A) CLINICAL FEATURES

For over 2 years the results of our various studies of non-gonococcal urethritis have been analysed by computer. The information submitted for analysis is shown in the Appendix. Forms were completed for all cases of non-gonococcal urethritis included in the present investigation, but unfortunately, due to a mishap, only 61 T-strain positive and 93 T-strain negative cases were analysed. The results are shown below:

(1) Possible Incubation Period  It was obviously impossible to give a reliable incubation period in the cases of married men who denied extramarital coitus, or of single men who admitted to regular coitus with only one consort. Also, in other cases symptoms had obviously been present for some time before promiscuous coitus, and in other cases coitus was denied. Table III shows the interval, where this was known, between promiscuous intercourse and the appearance of symptoms or signs of urethritis in 154 males.

(2) Symptoms These are shown in Table IV.

(3) Urethral Discharge  This is shown in Table V.

(4) Urethroscopic Appearances These are shown in Table VI (overleaf).

TABLE III

INCUBATION PERIOD IN 154 CASES OF NGU

<table>
<thead>
<tr>
<th>T-Strain</th>
<th>Not defined</th>
<th>Up to 1 wk</th>
<th>1-3 wks</th>
<th>Up to 1/12</th>
<th>Up to 2/12</th>
<th>Up to 3/12</th>
<th>Up to 6/12+</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Positive</td>
<td>15</td>
<td>19</td>
<td>19</td>
<td>5</td>
<td>2</td>
<td>1</td>
<td>1</td>
<td>61</td>
</tr>
<tr>
<td>Negative</td>
<td>35</td>
<td>19</td>
<td>27</td>
<td>7</td>
<td>2</td>
<td>2</td>
<td>1</td>
<td>93</td>
</tr>
</tbody>
</table>

TABLE IV

SYMPTOMS IN 154 CASES OF NGU

<table>
<thead>
<tr>
<th>T-Strain</th>
<th>Nil</th>
<th>Irritation, Scalding, or Pain on Micturition</th>
<th>Frequency</th>
<th>Haematuria</th>
<th>Total Cases</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>No.</td>
<td>Per cent.</td>
<td>No.</td>
<td>Per cent.</td>
<td>No.</td>
</tr>
<tr>
<td>Positive</td>
<td>35</td>
<td>57.0</td>
<td>20</td>
<td>32.8</td>
<td>5</td>
</tr>
<tr>
<td>Negative</td>
<td>43</td>
<td>45.1</td>
<td>41</td>
<td>43.9</td>
<td>8</td>
</tr>
</tbody>
</table>

TABLE V

URETHRAL DISCHARGE IN 154 CASES OF NGU

<table>
<thead>
<tr>
<th>T-Strain</th>
<th>Discharge</th>
<th>Scanty</th>
<th>Moderate</th>
<th>Profuse</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>No.</td>
<td>Per cent.</td>
<td>No.</td>
<td>Per cent.</td>
<td>No.</td>
</tr>
<tr>
<td>Positive</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Mucoid</td>
<td>19</td>
<td>4</td>
<td>0</td>
<td>23</td>
</tr>
<tr>
<td></td>
<td>Mucopurulent</td>
<td>4</td>
<td>8</td>
<td>3</td>
<td>15</td>
</tr>
<tr>
<td></td>
<td>Purulent</td>
<td>5</td>
<td>4</td>
<td>14</td>
<td>23</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>28</td>
<td>16</td>
<td>17</td>
<td>61</td>
</tr>
<tr>
<td>Negative</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Mucoid</td>
<td>47</td>
<td>3</td>
<td>1</td>
<td>51</td>
</tr>
<tr>
<td></td>
<td>Mucopurulent</td>
<td>6</td>
<td>13</td>
<td>2</td>
<td>21</td>
</tr>
<tr>
<td></td>
<td>Purulent</td>
<td>5</td>
<td>6</td>
<td>10</td>
<td>21</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>58</td>
<td>22</td>
<td>13</td>
<td>93</td>
</tr>
</tbody>
</table>
(5) Subsequent History Of the 61 T-strain positive cases of urethritis, three are known to have recurred more than 3 months after the apparent cure of the initial attack. There were similar recurrences in four of the 93 T-strain negative cases.

(b) RESPONSE TO TREATMENT

Tetracycline 250 mg. was given four times a day for 4 days. Treatment was regarded as successful if signs of urethritis cleared within 14 days of starting therapy and did not recur during the subsequent observation period, or if they were absent at the last examination of those who defaulted after only one or two post-treatment inspections. The results are summarized in Table VII.

<table>
<thead>
<tr>
<th>Method</th>
<th>T-strain</th>
<th>No. of Cases</th>
<th>Cured</th>
<th>Failed</th>
<th>No follow-up</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Positive</td>
<td>95</td>
<td>49</td>
<td>25</td>
<td>21</td>
</tr>
<tr>
<td></td>
<td>Negative</td>
<td>84</td>
<td>42</td>
<td>22</td>
<td>20</td>
</tr>
<tr>
<td>2</td>
<td>Positive</td>
<td>82</td>
<td>44</td>
<td>22</td>
<td>16</td>
</tr>
<tr>
<td></td>
<td>Negative</td>
<td>53</td>
<td>29</td>
<td>14</td>
<td>10</td>
</tr>
</tbody>
</table>

T-strain Mycoplasmas after Tetracycline Treatment 110 cases of NGU were investigated for T-strain mycoplasmas 7 days after starting tetracycline treatment; positive cultures were obtained in 27 cases, including ten of the 45 cases which had been T-strain negative before treatment. Of these 27 cases, eight showed no evidence of urethritis and the remainder still showed signs of urethral inflammation.

T-strain Mycoplasmas in Consorts In the cases of 38 couples genital secretions from both partners were either T-strain negative or T-strain positive. In 48 couples, one partner’s secretions were T-strain positive and the other T-strain negative.

Cold Agglutinins Cold agglutinins were not demonstrated in any case.

Urease Inhibition Negative results were obtained in all patients.

Discussion

Table I shows that a higher incidence of isolation of T-strain mycoplasma was obtained when the primary inoculation was made in a liquid medium and then sub-cultured on to solid media (Method 2) than when the inoculum was plated directly on to a solid medium (Method 1). As a cotton-wool swab was used to collect the inoculum in Method 2 and a platinum wire loop in Method 1 the slightly superior results obtained by the former cannot be attributed with certainty to the liquid medium.

Judging from the results obtained in the 100 male cases of gonorrhoea and the T-strain negative cases of non-gonococcal urethritis in which the investigations were repeated after treatment, it seems that the incidence of T-strain mycoplasma could have been some 20 per cent. higher than appeared from these initial findings (Tables I and II). It will be appreciated that this does not invalidate any conclusions which might be reached from a comparison of the incidence of T-strain mycoplasma in the various groups in Tables I and II. Nor does it prevent the comparison of the findings in these Tables with those of other workers, as the incidence of T-strain mycoplasmas has usually been based on the results of investigations carried out on one occasion only in each case studied.

The rates of isolation of T-strain mycoplasmas in male cases of gonorrhoea, male cases of NGU and normal males (Table I), like those found by Ingham and others (1966) and Black and Rasmussen (1968), provide no support for the view that there is a causal relationship between the T-strain mycoplasmas and NGU. Likewise there is no support in our rates of isolation in the 86 couples, in the females with vaginitis or cervicitis, and in normal females (Table II). In fact, the findings in Table II are very similar to those of Csonka and others (1966) who recognized that the frequency with which T-strain mycoplasmas were recovered from normal females and the comparative infrequency of NGU were hardly compatible with the belief that the disease was caused by the T-strain mycoplasmas and led them to wonder whether special circumstances were necessary for the organism to become pathogenic.

If T-strain mycoplasmas only became pathogenic under certain conditions, then the urethritis produced might well present special features, as
was suggested by Shepard and others (1964). We
have to agree with Csonka and others (1966) who
could find no evidence in favour of this belief
because we found no significant difference in the
incubation period, symptomatology, or clinical
signs, including urethrocopic appearances, be-
tween cases in which T-strain mycoplasmas had
been isolated and those in which this organism had
not been recovered (Tables III to VI). Nor did it
appear that T-strain positive cases differed from
T-strain negative cases in their response to tetra-
cycline (Table VII) or in their tendency to recur.

We found no indication that the T-strain myco-
plasma was influential in the production of post
gonococcal urethritis. This is in keeping with our
other findings because it is impossible to distinguis
post-gonococcal urethritis from non-gonococcal urethritis on clinical grounds.

Little importance can be attached to the results
of our serological investigations. The demonstration
of cold agglutinins would have been important, but
no significance can be attached to our negative
findings. Nor can any significance be attached to
our failure to demonstrate antibodies by the urease
inhibition method, as the test was carried out in the
initial stages of the disease only. However, it is
pertinent to note that Purcell and others (1966) did
test sera during the course of the illness and could
demonstrate no rise in titre. This finding is in
agreement with our results and supports our
opinion that there is no causal relationship between
the T-strain mycoplasma and non-gonococcal urethritis.

**Summary**

Genital secretions from 841 males and 211
females were investigated for the presence of the
T-strain mycoplasma. The males included 314
cases of NGU and 404 of gonorrhoea; there were
also 123 males with no evidence of disease of the
lower genito-urinary tract who were used as
controls. The females included 72 cases of gonor-
rhoea and 48 of trichomonal vaginitis; there were
also 91 females with no evidence of disease of the
lower genito-urinary tract who were used as controls.

T-strain mycoplasmas were recovered in 51.3
per cent. of females with gonorrhoea, in 47.9 per
cent. of females with trichomonal vaginitis, and in
42.8 per cent. of the female controls.

Depending on the technique used, the incidence
of T-strain mycoplasma varied from 48.3 to 63.4
per cent. in males with gonorrhoea and from 53 to
60.7 per cent. in males with non-gonococcal urethritis. In the male controls the incidence was
41.2 per cent.

So far as clinical features, response to treatment,
and the tendency to recurrence were concerned, it
was impossible to distinguish between T-strain
positive and T-strain negative cases of non-
gonococcal urethritis. Nor was there any evidence
that T-strain mycoplasma had any influence on
the production of post-gonococcal urethritis. It is
concluded that there is no causal relationship
between the T-strain mycoplasma and non-
gonococcal urethritis.

We are glad to acknowledge our indebtedness to Miss
M. Wall, B.Sc., Birmingham Regional Statistician, and
to D. Taylor-Robinson, M.D., of the Salisbury Com-
mon Cold Research Unit, for their help.

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——, Alexander, C. E., Lunceford, C. D., and
729.

**La souche T de mycoplasme, dans les urérites
non gonococciques, est-t’elle pathogène ou
saprophytique?**

**RÉSUMÉ**

La présence de la souche T de mycoplasme fut
recherchée dans les sécrétions génitales de 841 hommes
et de 211 femmes. Parmi les hommes, 314 étaient
atteints d'UNG, 404 de gonococcie; figuraient aussi, à
titre de témoins, 123 hommes dont les voies uro-
genitales basses ne montraient aucun signe d'infection.
Parmi les femmes, il y avait 72 cas de gonococcie, 48 de
vaginite à trichomonas. Il y avait également, à titre de
témoins, 91 femmes dont les voies uro-génitales basses
ne montraient aucun signe d'infection.

Des souches T de mycoplasme furent isolées chez
51,3 pour cent des femmes gonococciques, chez 47,9 des
femmes atteintes de vaginite à trichomonas et chez 42,8
pour cent des femmes-témoins.
Selon la technique employée, l’incidence de la souche T alla de 48,3 à 63,4 chez les hommes gonococciques, de 53 à 60,7 pour cent chez ceux atteints d’UNG. L’incidence chez les témoins masculins fut de 41,2 pour cent.

Il fut impossible de distinguer les cas d’UNG positifs ou négatifs vis-à-vis de la souche T en ce qui concerne l’allure clinique, la réponse au traitement ou la tendance aux récidives. Il n’y fut pas non plus évident que la souche T de mycoplasme eût une influence sur la survenue d’urétrite post-gonococcique. Il est conclu qu’il n’y a pas de relation entre la présence de la souche T de mycoplasme et les urétrites non gonococciques.

### APPENDIX

#### Non-Gonococcal Urethritis

| Trial No. | 1 |
| Registration No. | 2 |
| Date of First Attendance | 8 Day Month Year |
| Marital Status | 0 Not known, 1 Single, 2 Married, 3 Widowed, 4 Divorced, 5 Separated, 6 Remarried |
| Race | 0 Not known, 1 U.K., 2 Eire, 3 Other European, 4 West Indian Negro, 5 African Negro, 6 Other Negro, 7 Asian, 8 Mediterranean (Non-European), 9 Other |
| Age (yrs) | 16 |
| Past History | 0 Nil, 1 One attack NSU, 2 More than one attack NSU, 3 GC, 4 GC + NSU, 5 Reiter’s disease |
| Consort | 0 Nil, 1 Marital, 2 Regular, 3 Acquaintance, 4 Pick-up, 5 Pro, 6 Same sex |
| Possible Incubation Period | 25 mths wks days |
| Duration before Treatment | 28 mths wks days |
| Symptoms | 0 Nil, 1 irritation, 2 Scalding, 3 Pain, 4 Diurnal frequency, 5 Nocturnal frequency, 6 Diurnal + nocturnal frequency, 7 Haematuria |
| Character of Discharge | 1 Scanty, 2 Moderate, 3 Profuse, 4 Watery, 5 Mucoid, 6 Mucopurulent, 7 Purulent |
| Urine | 0 Not examined, 1 Clear, 2 Clear + threads, 3 Haze, 4 Haze + threads, 5 Blood, 6 Albumin, 7 Sugar, 8 pH less than 6.5, 9 pH 6-7, 10 pH 7 or over |
| Films | 1 Sterile, 2 T. vaginalis, 3 Coliform, 4 Strep. faecalis, 5 Haemophilus, 6 Thrush, 7 Inclusions, 8 Other |
### T-STRAIN MYCOPLASMA IN NGU

<table>
<thead>
<tr>
<th>Rectal Films</th>
<th>Before Treatment</th>
</tr>
</thead>
<tbody>
<tr>
<td>(a)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>1 Normal, 2 Fungal, 3 Not done</td>
</tr>
<tr>
<td>(b)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>1 Normal, 2 Fungal, 3 Not done</td>
</tr>
<tr>
<td>Fluorescing Antibodies</td>
<td>1 Not done, 2 Present, 3 Absent</td>
</tr>
<tr>
<td>Cultures</td>
<td>1 Sterile, 2 T. vaginalis, 3 Mycoplasma T-Strain, 4 TRIC agent, 5 Other</td>
</tr>
<tr>
<td>Urinary Deposit</td>
<td>0 Not examined, 1 Pus cells, 2 No pus, 3 Sterile, 4 Staph. albus, 5 Staph. aureus, 6 Coliform, 7 Strep. faecalis, 8 B. proteus</td>
</tr>
<tr>
<td>Deposit after Treatment</td>
<td>0 Not examined, 1 Pus cells, 2 No pus, 3 Sterile, 4 Staph. albus, 5 Staph. aureus, 6 Coliform, 7 Strep. faecalis, 8 B. proteus, 9 Other</td>
</tr>
<tr>
<td>Complications</td>
<td>0 None, 1 Before treatment, 2 After treatment, 3 Both</td>
</tr>
<tr>
<td>Genito-urinary Complications</td>
<td>0 None, 1 Periurethral abscess, 2 Prostatitis, 3 Epididymis, 4 Stricture, 5 Upper urinary tract, 6 Other</td>
</tr>
<tr>
<td>Systemic Complications</td>
<td>0 None, 1 Arthritis, 2 Conjunctivitis, 3 Iritis, 4 Keratoderma, 5 Balanitis, 6 Other</td>
</tr>
<tr>
<td>Urethrosopic Examination</td>
<td>0 Not done, 1 Not possible, 2 Normal, 3 Congestion, 4 Soft infiltration, 5 Stricture, 6 Warts, 7 Sago grains, 8 Congenital abnormality</td>
</tr>
<tr>
<td>Urethral Meatus</td>
<td>1 Normal, 2 Inflamed, 3 Hypospadias, 4 Epispadias, 4 Circumcised, 5 Uncircumcised</td>
</tr>
<tr>
<td>Treatment</td>
<td>0 Nil, 1 Lactose, 2 Tetracycline × 4 days, 3 Tetracycline × 14 days, 4 Streptomycin + sulphonamides, 5 Vitamin C, 6 Other, 7 Tetracycline + Nystatin</td>
</tr>
<tr>
<td>Results</td>
<td>1 Cleared, 2 Failed, 2 Relapsed</td>
</tr>
<tr>
<td>Relapse Time after Treatment</td>
<td>1 Tetracycline, 2 Other</td>
</tr>
<tr>
<td>Re-treatment</td>
<td>1 Tetracycline, 2 Other</td>
</tr>
<tr>
<td>Response to Re-treatment</td>
<td>1 Cleared, 2 Failed, 3 Relapsed</td>
</tr>
<tr>
<td>Relapse Time after Re-treatment</td>
<td>1 Cleared, 2 Failed, 3 Relapsed</td>
</tr>
<tr>
<td>Follow-up</td>
<td>1 Nil, 2 Incomplete, 3 Complete</td>
</tr>
<tr>
<td>Number of Attendances</td>
<td>0 Not known, 1 NSU, 2 Reiter's disease, 3 Stricture</td>
</tr>
<tr>
<td>Subsequent History</td>
<td>0 Not known, 1 NSU, 2 Reiter's disease, 3 Stricture</td>
</tr>
</tbody>
</table>

Survey Number: M 80