INCLUSION BODIES IN NON-GONOCOCCAL URETHRITIS
ALSO SKIN LESIONS WITH INCLUSIONS*†

BY
A. SIBOULET
Paris

In a recent statistical survey of 2,756 cases of non-gonococcal urethritis examined at the Urological Clinic of the Faculty of Medicine in Paris (Hôpital Cochin), inclusion bodies were found in 84, i.e., an average of about 3 per cent. In patients suffering from the urethro-conjunctivo-synovial syndrome, we have found, as previously reported by Harkness (1945), inclusion bodies in scrapings from the urethra and skin lesions. We have always been particularly careful in the identification of inclusion bodies, and only record their presence when there are distinct nucleus and cell boundaries, elementary bodies stained a definite violet-purple with Giemsa, granules of regular size, clearly delimited crescent-shaped grouping, etc. (Figs 1 and 2).

To confirm a viral aetiology, it is necessary, as Willcox, Howard, and Findlay (1954) remarked, to have the confirmation of serological tests (complement deviation of the psittacosis, ornithosis group), skin tests (obtained with lymphogranuloma venereum, psittacosis, trachoma antigen group), and cultures with transmission to animals in addition to finding inclusion bodies similar to those in the accepted virus diseases. Observing these criteria, we have found in certain cases that the inclusion bodies present in epithelial cells from the urethra have all the characteristics of those described in other virus diseases.

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† One of a series of short papers read to the M.S.S.V.D. on March 25, 1955.


### Table

<table>
<thead>
<tr>
<th>Case No.</th>
<th>Age (yrs)</th>
<th>Sex</th>
<th>Clinical Diagnosis</th>
<th>Site of Inclusion Bodies</th>
<th>Serological Tests</th>
<th>Complement Deviation Reaction Psittacosis Group</th>
<th>Treatment</th>
<th>Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>35</td>
<td>Male</td>
<td>Urethroconjunctivo-synovial syndrome + ectodermosis erosiva pluriorificialis</td>
<td>+ + + + Transitory 0</td>
<td>- - - -</td>
<td>Terramycin 18 g.</td>
<td>Favourable Contact treated</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>33</td>
<td>Male</td>
<td>Urethroconjunctivo-synovial syndrome + ectodermosis erosiva pluriorificialis</td>
<td>+ + + + 2 - -</td>
<td>- - - -</td>
<td>Aureomycin 20 g. 2</td>
<td>Fair</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>35</td>
<td>Male</td>
<td>Urethroconjunctivo-synovial syndrome + ectodermosis erosiva pluriorificialis</td>
<td>+ + + + Transitory 0</td>
<td>- - - -</td>
<td>Terramycin 8 g.</td>
<td>Good</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>29</td>
<td>Male</td>
<td>Urethroconjunctivo-synovial syndrome + ectodermosis erosiva pluriorificialis</td>
<td>+ + + + 0 - -</td>
<td>- - - -</td>
<td>Aureomycin 12 g. then Terramycin 20 g. 2</td>
<td>Cure after systematic treatment of partners</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>44</td>
<td>Male</td>
<td>Urethroconjunctivo-synovial syndrome + ectodermosis erosiva pluriorificialis</td>
<td>+ + + + 0 - -</td>
<td>- - - -</td>
<td>Terramycin 9 g. 2</td>
<td>Good</td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>36</td>
<td>Male</td>
<td>Urethroconjunctivo-synovial syndrome + genital ulcerations</td>
<td>+ + + + Transitory 4</td>
<td>- - - -</td>
<td>Terramycin 10 g. Cortisone</td>
<td>Fair</td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>38</td>
<td>Male</td>
<td>Urethroconjunctivo-synovial syndrome + genital ulcerations</td>
<td>+ + + + 0 - -</td>
<td>- - - -</td>
<td>Aureomycin 10 g. 2</td>
<td>Favourable</td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>29</td>
<td>Male</td>
<td>Urethroconjunctivo-synovial syndrome + genital ulcerations</td>
<td>+ + + + 0 - -</td>
<td>- - - -</td>
<td>Terramycin 10 g. Erythromycin Aureomycin 10 g.</td>
<td>Fair</td>
<td></td>
</tr>
<tr>
<td>9</td>
<td>33</td>
<td>Male</td>
<td>Urethritis + buccal ulcerations</td>
<td>+ + + + 6</td>
<td>- - -</td>
<td>Aureomycin 10 g.</td>
<td>Good</td>
<td></td>
</tr>
<tr>
<td>10</td>
<td>24</td>
<td>Male</td>
<td>Urethritis + buccal ulcerations</td>
<td>+ + + + 2</td>
<td>- - -</td>
<td>Terramycin 10 g. 2</td>
<td>Good</td>
<td></td>
</tr>
</tbody>
</table>

The ten patients reported have all suffered from dermatological manifestations in addition to urethritis: five cases of the urethro-conjunctivo-synovial syndrome with ectodermosis erosiva pluriorificialis.
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orificialis; three cases of the urethro-conjunctivo-
synovial syndrome with genital ulcerations; and two
cases of urethritis with buccal ulcerations (Table).

The microphotographs (Figs 1 and 2) and the
summary of these ten cases show that the inclusion
bodies detected are morphologically indistinguish-
able from those found in the recognized viral dis-
eases. Such inclusion bodies, however, were found
in only about 3 per cent. of the cases of non-gono-
occal urethritis in our statistical survey.

The pathogenicity of these inclusions is suggested
by:

(a) their disappearance when the treatment prescribed
has proved clinically successful;

(b) their persistence after failure of treatment;

(c) their reappearance after renewed contact with one
or more of the non-treated partners;

(d) their definite disappearance after effective anti-
biotic treatment of both patient and partners;

(e) failure to find this type of inclusion body in 150
persons with clinically healthy urethrae.

Lastly, it is emphasized that, in the same patient,
inclusion bodies of the same type were found in
epithelial cells of the urethra, the conjunctiva, and
skin lesions, especially in ectodermosis erosiva pluri-
orificialis.

I should like to thank Dr. A. H. Harkness for introduc-
ing me to this very interesting and absorbing subject, and
Mesdames Jouveau-Dubreuil and Slomkowski for
their technical help.

REFERENCES

J. Syph., 38, 216.