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

BY

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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.

* Received for publication May 5, 1955.
† One of a series of short papers read to the M.S.S.V.D. on March 25, 1955.
### Table: Site, Therapy, and Results of Ten Cases of Urethritis and Skin Lesions with Inclusions

<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 Pustules Group</th>
<th>Treatment</th>
<th>Results</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Urethra</td>
<td>Conjunctiva</td>
<td>Synovial Membrane</td>
<td>Skin Lesion</td>
<td>Immobilization (per cent.)</td>
</tr>
<tr>
<td>1</td>
<td>35</td>
<td>Male</td>
<td>Urethro-conjunctivo-synovial syndrome + ectodermosis erosiva pluriroificialis</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>Transitory -</td>
</tr>
<tr>
<td>2</td>
<td>33</td>
<td>Male</td>
<td>Urethro-conjunctivo-synovial syndrome + ectodermosis erosiva pluriroificialis</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>2</td>
</tr>
<tr>
<td>3</td>
<td>35</td>
<td>Male</td>
<td>Urethro-conjunctivo-synovial syndrome + ectodermosis erosiva pluriroificialis</td>
<td>+</td>
<td></td>
<td></td>
<td>+</td>
<td>Transitory -</td>
</tr>
<tr>
<td>4</td>
<td>29</td>
<td>Male</td>
<td>Urethro-conjunctivo-synovial syndrome + ectodermosis erosiva pluriroificialis</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>0</td>
</tr>
<tr>
<td>5</td>
<td>44</td>
<td>Male</td>
<td>Urethro-conjunctivo-synovial syndrome + ectodermosis erosiva pluriroificialis</td>
<td>+</td>
<td></td>
<td></td>
<td>+</td>
<td>0</td>
</tr>
<tr>
<td>6</td>
<td>36</td>
<td>Male</td>
<td>Urethro-conjunctivo-synovial syndrome + genital ulcerations</td>
<td>+</td>
<td></td>
<td></td>
<td>+</td>
<td>Transitory -</td>
</tr>
<tr>
<td>7</td>
<td>38</td>
<td>Male</td>
<td>Urethro-conjunctivo-synovial syndrome + genital ulcerations</td>
<td>+</td>
<td></td>
<td></td>
<td>+</td>
<td>0</td>
</tr>
<tr>
<td>8</td>
<td>29</td>
<td>Male</td>
<td>Urethro-conjunctivo-synovial syndrome + genital ulcerations</td>
<td>+</td>
<td></td>
<td></td>
<td>+</td>
<td>0</td>
</tr>
<tr>
<td>9</td>
<td>33</td>
<td>Male</td>
<td>Urethritis + buccal ulcerations</td>
<td>+</td>
<td></td>
<td></td>
<td>+</td>
<td>6</td>
</tr>
<tr>
<td>10</td>
<td>24</td>
<td>Male</td>
<td>Urethritis + buccal ulcerations</td>
<td>+</td>
<td></td>
<td></td>
<td>+</td>
<td>2</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 pluri-
Inclusion Bodies in Non-Gonococcal Urethritis

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 indistinguishable from those found in the recognized viral diseases. Such inclusion bodies, however, were found in only about 3 per cent. of the cases of non-gonococcal 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 antibiotic 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 pluriorificialis.

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

REFERENCES

Inclusion Bodies in Non-Gonococcal Urethritis, also Skin Lesions with Inclusions
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doi: 10.1136/sti.31.4.235

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