A Note on the Use of Reduced Transport Fluid (RTF) for Isolation of *Neisseria gonorrhoeae*

M. H. FINLAYSON, K. F. D. WILLEY, H. D. BREDE, A. J. WILSON

**RESULTS AND COMMENT**

Table I indicates the results obtained. Although the number of specimens was limited, it will be noted that under our conditions, transport on charcoal-impregnated swabs, and placed in tubes containing either Stuart's medium or RTF. In other cases, an additional plain sterile cottonwool swab was placed in RTF. After varying intervals of time during which the swabs stood at room temperature (± 20 - 25°C), Petri dishes containing Thayer-Martin medium were inoculated and incubated for 48 hours in a CO₂ atmosphere (candle-flame) and then examined. Suspicious colonies were tested for oxidase activity, smears prepared and stained and, when positive, further identification and antibiotic sensitivity tests were carried out.

The charcoal-impregnated swabs, Stuart's transport medium and Thayer-Martin medium were prepared as described by Finlayson and Gibbs. The RTF was prepared as follows:

**Solution 1:** 0.6% K,HPO₄

**Solution 2:** 1.2% NaCl

**Solution 3:** O.1M Na EDTA (formula weight 416)

**Solution 4:** 1% dithiothreitol-store at 10°C

Combine 75 ml of solution 1, 75 ml of solution 2, 10 ml of solution 3, and 20 ml of solution 4. Lilute to 1 litre with distilled water. Filter-sterilise using a membrane filter (0.22-µm pore size) and store at 10°C until needed.

**MATERIALS AND METHODS**

Swabs containing pus from urethral discharges were obtained from 55 male patients attending the Cape Town municipal VD clinics.

**TABLE I. ISOLATION OF *N. GONORRHOEAE* FROM SWABS TRANSPORTED IN RTF**

<table>
<thead>
<tr>
<th>Batch</th>
<th>Total number of swabs</th>
<th>Smears positive for <em>N. gonorrhoeae</em></th>
<th>Positive cultures from RTF</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>16</td>
<td>7</td>
<td>11</td>
</tr>
<tr>
<td>2</td>
<td>9</td>
<td>1</td>
<td>9</td>
</tr>
<tr>
<td>3</td>
<td>19</td>
<td>19</td>
<td>16</td>
</tr>
<tr>
<td>4</td>
<td>11</td>
<td>11</td>
<td>9</td>
</tr>
<tr>
<td></td>
<td>55</td>
<td>48</td>
<td>45</td>
</tr>
</tbody>
</table>
A preliminary comparison of these results with the results obtained after transport on Stuart's medium showed that growth of *N. gonorrhoeae* was much heavier and colonies larger than on culture media inoculated after transport in Stuart's medium. Furthermore, the growth of contaminating organisms was much reduced, as can be seen in Fig. 1.

It would appear that RTF is very suitable for the transport of specimens containing *N. gonorrhoeae*. It not only preserves the organisms during a period of 18-24 hours, but also provides heavy growth and little contamination of the culture medium.

A number of positive cultures, 17 from 30 swabs, were obtained by using plain cottonwool swabs in the RTF and inoculating culture medium 18-24 hours later. Should these results be borne out by further investigation, the use of plain cottonwool swabs could prove most useful. This swab is easier to prepare and can be used to make smears for microscopical examination without introducing carbon particles, which sometimes make identification of gonococci extremely difficult.

We wish to thank Dr P. J. Burger, Department of Medical Microbiology, for the photograph.

**REFERENCES**