TREATMENT OF NON-GONOCOCCAL URETHRITIS FROM THE POINT OF VIEW OF EFFICIENCY AND COST: STREPTOMYCIN WITH LONG-ACTING SULPHONAMIDES*

BY

G. JELINEK

St. Bartholomew’s Hospital, London

In two previous papers (Jelinek, 1957, 1959), I have reported on patients suffering from non-gonococcal urethritis who had been treated with tetracyclines, oxytetracycline, and streptomycin combined with sulphonamides. The last method compared favourably with the then much more expensive tetracyclines and the question arose whether—after an interval of 5 years—the sulphonamides had stood up to the test of time and retained their efficiency. I also wanted to find out what results the newer types of sulphonamides would give, especially the very long-acting RO 4-4393, the whole dosage of which can be given to the patient in the clinic.

RO 4-4393, a Roche product (formula 4 sulphanilamido 5,6 dimethoxy-pyrimidine), has been extensively used in Africa, the Middle East, and South America for conditions as varied as leprosy, trachoma, meningococcal meningitis, staphylococcal pneumonia, and acne. It has been used therapeutically in some 11,000 cases and prophylactically in 3,000, in dosages up to 4 g. daily for 4 to 5 days, or in lesser doses up to 21 months. The side-effects were reported to be less than 2·5 per cent. The price has not yet been fixed, but is expected to be in the region of 2s. for one 0·5-g. tablet.

Material and Method

In this study, 559 patients with untreated non-gonococcal urethritis were each given one intramuscular injection of 1 g. streptomycin sulphate and an additional drug as follows:

<table>
<thead>
<tr>
<th>No. of Cases</th>
<th>Drug</th>
<th>Dosage</th>
<th>No. of De-</th>
<th>No. of Cured</th>
<th>Cure-rate (per cent.)</th>
<th>Cost (s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>66</td>
<td>Madribon ...</td>
<td>1 g. daily for 5 days</td>
<td>23</td>
<td>34</td>
<td>79</td>
<td>5</td>
</tr>
<tr>
<td>52</td>
<td>Dureenate ...</td>
<td>1 g. daily for 5 days</td>
<td>9</td>
<td>23</td>
<td>55</td>
<td>5/6</td>
</tr>
<tr>
<td>141</td>
<td>Sulhamethoxy-pyridazine</td>
<td>1 g. × 5</td>
<td>147</td>
<td>68</td>
<td>61</td>
<td>5/6</td>
</tr>
<tr>
<td>147</td>
<td>RO 4-4393 ...</td>
<td>1 g. daily for 5 days</td>
<td>65</td>
<td>66</td>
<td>63</td>
<td>5/6</td>
</tr>
<tr>
<td>153</td>
<td>RO 4-4393 2 g.</td>
<td>One dose 1 g.</td>
<td>47</td>
<td>53</td>
<td>53</td>
<td>9/6</td>
</tr>
</tbody>
</table>

Those on RO 4-4393 swallowed their tablets under observation in the clinic by the doctor or nurse.

The patients were followed up for 3 months. If at the end of that period they were free from signs and symptoms, no further treatment was required, their urine was clear, and prostatic fluids and serology were normal, they were considered to be cured.

Results

The results (Table) with sulphamethoxy-pyridazine were not as good as they had been in 1959 (Jelinek) when the cure rate was 82·3 per cent., whereas now it was down to 61 per cent. This is not unlike the figures Willcox (1962) obtained with similar treatment. Prebble (1962) had a cure rate of 80 per cent. with streptomycin and Madribon, which compares with 79 per cent. in the present series.

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<th>No. of De-</th>
<th>No. of Cured</th>
<th>Cure-rate (per cent.)</th>
<th>Cost (s)</th>
</tr>
</thead>
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<td>Streptomycin 1 g.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
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<td>+ Madribon 1 g. × 5</td>
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<td>23</td>
<td>34</td>
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</table>

* Estimate approximate dependent on bulk-buying.

There were other puzzling features in these results which may cast some doubt on their value: in patients who received only 1 g. RO 4-4393 the cure rate was 10 per cent. better than in those who had 2 g.—yet the default rate was higher in patients who

* Paper read at the MSSVD Meeting in Dublin, May 29 and 30, 1964.

had 2 g. compared with those who had only 1 g. One
can only speculate about the reasons for these
paradoxical findings. Perhaps the numbers of
patients in the groups investigated are too small to
have any statistical significance or the whole
evaluation of the therapy of non-gonococcal
urethritis will have to be reconsidered (Fowler, 1958).

Side-effects.—There were no toxic effects with the
conventional sulphonamides (Madribon, Durenate, and
sulphamethoxy-pyridazine). With RO 4–4393 two patients
vomited, one had diarrhoea, and one had dizziness, but all
these reactions were transient and slight.

Although the overall results are not very good, the
cost has remained low and the treatment comparatively safe. The recent release of cheaply
imported tetracyclines from Italy and Poland
seriously undercuts the price of the combined
streptomycin with sulphonamides treatment.

Summary

A series of 599 patients with untreated non-
gonococcal urethritis were given one intramuscular
injection of streptomycin sulphate 1 g. and additional
long-acting sulphonamides.

The single dose long-acting Roche product, RO 4–4393, gave results similar to other long-acting sulphonamides.

Overall results were not good (only just over
50 per cent. cure rate) and they were considerably
worse than those obtained in a similar series five
years ago.

I wish to thank Dr Garrod of Roche Products for the
supply of RO 4–4393 and Dr A. J. Evans of St. Thomas’s
Hospital for his share in the RO 4–4393 survey.

REFERENCES

Traitemnt des urérites non-gonocociques en fonction de
l’efficacité et du prix, par streptomycine et sulfa-mides
retard

RéSUMé

Une série de 559 malades atteints d’urérite non-
gonococcique, n’ayant jamais été traités, reçoivent une
piqûre intramusculaire de 1 g. de sulfate de streptomycine
et en plus des sulfa-mides retard.

La dose unique de sulfa-mide retard Roche RO 4–4393
donna des résultats semblables à ceux obtenus avec les
autres sulfa-mides retard.

Dans l’ensemble les résultats ne furent pas bons
(seulement un peu plus de 50% de succès) et ils furent
pires que ceux obtenus dans une série semblable il y a 5 ans.
Treatment of Non-gonococcal Urethritis from the Point of View of Efficiency and Cost: Streptomycin with Long-acting Sulphonamides

G. Jelinek

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