Correspondence

TO THE EDITOR, British Journal of Venereal Diseases

Quantitative microhaemagglutination assay for Treponema pallidum antibodies in humans

Sir,

Tight and White1 in their paper entitled "Quantitative microhaemagglutination assay for Treponema pallidum antibodies in experimental syphilis" discuss certain shortcomings of studies on the quantitative microhaemagglutination assay for Treponema pallidum antibodies (MHA-TP) in humans. These authors suggest that data on specific areas requiring further study, which include the effect of treatment on MHA-TP titres and the value of the MHA-TP as an indicator of reinfection, could be readily obtained by performing sequential quantitative non-treponemal and MHA-TP tests on follow-up sera. Such follow-up has been standard policy in Edinburgh for several years and some information relevant to Tight and White's suggestions has already been published.2 We would like to summarise the main points.

The response of the MHA-TP to treatment was studied in 61 cases of early infectious syphilis. In none of the 55 cases of early syphilis in which the pre-treatment MHA-TP result was positive did the test give a consistently negative result after treatment. In primary and early latent syphilis it was not possible to demonstrate any significant changes, but in some cases of secondary syphilis a significant and rapid fall in MHA-TP titre occurred with treatment. In general the titre decreased significantly within four months of treatment for secondary syphilis to a level which was maintained more or less steady thereafter. This finding is at variance with the suggestion of O'Neill3 that the post-treatment MHA-TP titre reflects the stage at which the disease was arrested, declining subsequently only slowly, if at all, with time.

Reinfection with secondary syphilis occurred in three cases; in each case there was a significant increase in MHA-TP titre and a parallel increase in the Venereal Disease Research Laboratory (VDRL) test titre. Because of the interval between follow-up tests it was impossible to say whether the increase in MHA-TP titre preceded that of the VDRL test or vice versa. Two of the reinfected patients had shown significant reductions in the MHA-TP titre after treatment of the original infection. After treatment of the reinfection the titres again fell, although more slowly, and in one a fall was not observed until 12 months after treatment.

Yours faithfully,
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References

TO THE EDITOR, British Journal of Venereal Diseases

Antenatal screening for syphilis

Sir,

The results of the Treponema pallidum haemagglutination (TPHA) test and the Venereal Disease Research Laboratory (VDRL) test were reviewed on sera from 7140 antenatal patients seen between 1976 and 1979. The fluorescent treponemal antibody-absorbed (FTA-ABS) test was used when confirmation was required (table). The serological methods have been described.1 2

The TPHA test gave a positive result for 53 (0.74%) sera, although the FTA-ABS test failed initially to confirm the TPHA reaction in 15 of those 53 sera in which it was the only test giving a positive result. On testing further samples, the positive TPHA results could not be reproduced in two patients and the FTA-ABS test result remained negative; in four patients a positive TPHA test result was found in association with a positive FTA-ABS reaction, while subsequent samples were not received from the remainder. Thus, 42 (0.59%) patients had definitely confirmed positive treponemal test results. If the TPHA test had not been used for screening, only 17 (0.24%) sera would have given a positive result, a figure comparable to that found by Hare1 on sera from the antenatal patients attending the nearby Queen Charlotte's Hospital, London.

Biological false-positive VDRL reactions were found in 11 (0.15%) sera. The patients whose sera were reactive in the VDRL test alone were not treated; they had normal deliveries at term, and in none of the offspring was there any evidence of congenital syphilis. Five patients in whom only the TPHA test gave a positive result likewise had normal deliveries and offspring. The remaining four such cases were untraceable.

Titres of the VDRL reaction and the TPHA test (from 80 upwards) tend to correspond but both tests do not always give a positive result for the same serum from patients with primary syphilis. Lesinski and his colleagues4 showed that in 57 patients with primary syphilis there were six (11%) whose sera gave a positive VDRL reaction but a negative TPHA test result. The TPHA test result may not only be positive when the VDRL test result is negative in primary syphilis, but exceptionally the TPHA test result may

<table>
<thead>
<tr>
<th>TABLE Number of sera with positive test results</th>
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<tbody>
<tr>
<td>Serological test results</td>
</tr>
<tr>
<td>TPHA+, FTA/ABS+, VDRL-</td>
</tr>
<tr>
<td>TPHA+, FTA/ABS-, VDRL-</td>
</tr>
<tr>
<td>TPHA+, FTA/ABS+, VDRL+</td>
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<tr>
<td>TPHA+, FTA/ABS-, VDRL+</td>
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<tr>
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<tr>
<td>TPHA-, FTA/ABS-, VDRL-</td>
</tr>
<tr>
<td>TPHA-, FTA/ABS+, VDRL+</td>
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<tr>
<td>Total</td>
</tr>
</tbody>
</table>

+ Positive – negative
*Includes one doubt positive TPHA result at a serum dilution of 1/80.

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Quantitative microhaemagglutination assay for Treponema pallidum antibodies in humans.
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