

PENICILLIN IN NON-GONOCOCCAL URETHRITIS*

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The place of broad-spectrum antibiotics in the treatment of non-gonococcal urethritis (N.G.U.) is well established (Harkness, 1953; Willcox, 1954; Morton and Read, 1957). A success rate of 85 per cent. with oral oxytetracycline hydrochloride (Terramycin) is above that obtained with other antibiotics, sulphonamides, or a combination of these. High levels of response to such therapy have been one of the arguments in favour of a virus aetiology in a percentage of non-gonococcal cases.

The place of penicillin in the treatment of this condition has received little attention. Willcox (1953) reported treating 85 cases with 600,000 units procaine penicillin daily for 3 days. There were 36 treatment failures within 3 post-treatment months, *i.e.* a success rate of 57 per cent. Hurst (1957) has pointed out that penicillin has a place in the treatment of those virus conditions which respond to broad-spectrum antibiotics. He stresses the need for adequate dosage, *e.g.* in trachoma.

Material

A series of 48 males with N.G.U. was treated. The average age was 28 years (range 17 to 71). Nineteen men were married. In eighteen of the 48 there was a history of previous N.G.U. and five had a history of gonorrhoea. The apparent source of infection was marital in eight, doubtful in six, and extra-marital in 34. In so far as the incubation period could be determined, it was less than 10 days in seventeen, over 10 days in 25, and unknown in six. In all but eleven cases the duration of urethral discharge was less than 10 days. The discharge was purulent or muco-purulent in all cases.

Management

Gonorrhoea was excluded by Gram-stained smears and by culture, and *Trichomonas vaginalis* was excluded by examination of wet specimens and culture. A routine Wassermann reaction, Kahn test, and Reiter protein

complement-fixation test was carried out in all cases. 24 were given 600,000 units procaine penicillin in one injection daily for 5 days and the remainder a broad-spectrum penicillin called Penbritin (Ampicillin) in oral doses of 250 mg. 6-hrly for 4 days.

Results (Table)

Successful treatment is defined as absence of urethral discharge and clear urine. Failure was usually diagnosed a week after the start of penicillin and other treatment was then instituted.

TABLE
TREATMENT OF N.G.U. WITH PENICILLIN

Preparation	No. Treated	Success		Failure	Re- currence
		No.	Per cent.		
Procaine penicillin	24	14	58	10	3
Penbritin.. ..	24*	17	70	6	5

* One patient had no follow-up examination.

A follow-up period of 3 months was the aim. Follow up to the point of discharge from care or to the point of re-treatment was: 1 week or more—45 cases; 2 weeks or more—35 cases; 9 weeks or more—19 cases. One patient did not return after the first visit and two patients were seen for only one follow-up visit.

No attempt was made to divide the recurrences into relapse and re-infection. Two patients developed gonorrhoea and one trichomonal urethritis after fresh exposure during the follow-up period. Five cases developed Reiter's arthritis. Two of these had failed to respond to Penbritin, but in one the urethritis had cleared after Penbritin. Two patients developed Reiter's arthritis after the urethritis had failed to respond to a course of procaine penicillin as prescribed.

In no cases were there any side-effects attributable to treatment.

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Discussion

A response rate of 58 per cent. to procaine penicillin is better than would be generally expected. A 70 per cent. response to the broad-spectrum penicillin, Penbritin, while not reaching the levels obtained with some other broad-spectrum antibiotics, compares favourably with Sulphatriad and streptomycin (Morton and Read, 1957) and with erythromycin (Willcox, 1954). The pessimistic outlook as regards penicillin in N.G.U. does not appear to us to be well founded.

Reiter's syndrome, partial or complete, does not usually occur in more than 3 to 4 per cent. of cases of N.G.U. That 10 per cent. in this series developed arthritis is remarkable. It is many years since Gold (1951) warned of the possibility that penicillin might precipitate manifestations of lupus erythematosus, and the exhibition of other antibiotics and of the sulphonamides has been noted to precede the onset of manifestations of collagen disease. That a similar reaction has occurred in our series appears to be a possibility.

Summary

- (1) 48 cases of N.G.U. were treated with penicillin: 24 with 600,000 units procaine penicillin daily for 5 days, and 24 with Penbritin (ampicillin) in doses of 250 mg. 6-hrly for 4 days. Fourteen (58 per cent.) and seventeen (70 per cent.) responded satisfactorily in each group, and there were three and five recurrences respectively.
- (2) These results are not so good as those given by Terramycin, Aureomycin, and chloramphenicol, but they compare well with the

results given by Sulphatriad, streptomycin and erythromycin.

- (3) No side-effects attributable to either therapy were noted. Five patients developed Reiter's arthritis and this is thought to be an unusually high percentage.

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Traitement de l'urétrite non-gonococcique par la pénicilline

RÉSUMÉ

(1) On décrit 48 cas d'urétrite non-gonococcique traités par la pénicilline: 24 reçurent 600.000 unités de pénicilline procaine par jour pendant 5 jours et 24 reçurent 250 mg. de Penbritine (ampicilline) toutes les 6 heures pendant 4 jours. Chez 14 (50%) du premier groupe et 17 (70%) du second groupe les résultats furent bons, et il y eut 3 et 5 récurrences respectivement.

(2) Ces résultats ne sont pas si bons que ceux obtenus par l'administration de Terramycine, Auréomycine, ou chloromycétine, mais ils sont meilleurs que ceux obtenus par le Sulfatriade, la streptomycine, et l'érythromycine.

(3) Il n'y eut aucune réaction inattendue. Cinq malades furent atteints de l'arthrite du syndrome de Reiter, ce qui constitue un pourcentage insolite.