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THE SEVEN-YEAR ITCH*

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The following two cases of recurrent syphilis would appear to be of more than usual interest.

Case Reports

Case 1, a white male aged 42, was first seen in July, 1943, suffering from secondary syphilis. He was admitted to hospital and was treated with twice weekly injections of N.A.B. and bismuth (total 4·5 g. and 1·2 g. respectively); 4 months later he had become sero-negative but he was given a second course of injections in November/December, 1943 (Mapharside 0·5 g. and bismuth 1·2 g.). Further S.T.S. in January and April, 1944, were also negative. A third course of injections was administered in April/May, 1944 (Mapharside 0·48 g. and bismuth 1·2 g.). Blood tests in August, 1944, and February, 1945, were negative. He was, nevertheless, given a fourth course of treatment in February/March, 1945 (Mapharside 0·48 g. and bismuth 1·2 g.). Blood tests in July, 1945, and January, 1946, were negative, and after this last visit the patient failed to attend.

He was next seen in October, 1950, when, following extra-marital exposure, he became worried about some 'small seborrhoeic patches on the anterior abdominal wall and thorax'. The Wassermann reaction and Meinicke test proved to be strongly positive and this was confirmed on repetition. There were no clinical signs of cardiovascular or neurosyphilis and the cerebrospinal fluid was completely normal. He was treated with weekly injections of P.A.M. 600,000 units and Bisoxyl 0·1 g. (total 8·4 mega units and 1·4 g. respectively). By March, 1951, he had become sero-negative and regular 3-monthly blood tests between that date and December, 1952, were consistently negative. At this point he lapsed from observation once more but he attended again in February, 1955, with a non-specific urethritis. A routine Wassermann reaction was negative.

He was next seen in December, 1957, when he presented with a typical macular secondary syphilide. There was a history of exposure to possible infection 3 weeks and 5 weeks previously, but no history of primary lesion and no penile scar. The Wassermann reaction was positive 1/128, and the Meinicke test strongly positive. He was treated with P.A.M. 600,000 units daily (total 9 mega units). By March, 1958, the Wassermann reaction was positive 1/16 and in May positive 1/8. In May/June, 1958, he was given a further 16·8 mega units P.A.M. The serological reactions were still weakly positive as late as March, 1959, but in June, 1959, he had once more attained sero-negativity.

Case 2, a white male aged 48 years, was first seen in October, 1943, suffering from secondary spyhilis. He was treated with Mapharside and bismuth (0·6 g. and 1·2 g. respectively). In May, 1944, the Wassermann reaction was negative and a second course of Mapharside and bismuth was administered. In December, 1944, the Wassermann reaction was once more strongly positive and a third course of injections was given (N.A.B. 5·4 g. with the usual 1·2 g. bismuth). In December, 1945, the Wassermann reaction was still strongly positive and he was given a fourth course of injections (N.A.B. 4·5 g. and bismuth). In January, 1946, the cerebro-spinal fluid was reported as follows:

Cells	6 per cmm.
Protein	120 mg. per cent.
Globulin	Increased
Lange	5443332210
Wassermann reaction	+ + + −

He was promptly admitted to hospital for malarial therapy (five rigors) followed by Tryparsamide and further injections of bismuth (30 g. and 1·2 g. respectively). In May, 1946, the blood Wassermann reaction was once more negative and the cerebro-spinal fluid showed a marked improvement:

Cells	3 per cmm.
Protein	60 mg. per cent.
Lange	1100000000
Wassermann reaction	+ − − −

He was nevertheless given a course of penicillin (aqueous) totalling 5 mega units. Further Wassermann reactions in October, 1946, March, 1947, and December, 1947, were all negative and the cerebro-spinal fluid in December, 1947, was completely normal.

He was not seen again until April, 1950, when he reported with a maculo-erythematous rash on the palms of both hands and on the glans penis which he stated had been present for 3 months. There were no other clinical signs of syphilis, but the blood Wassermann reaction and Meinicke test were both strongly positive. He did not admit having incurred any risk since his original infection. He was treated with twice weekly injections of P.A.M. and bismuth (8·4 mega units and 1·2 g.

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respectively) and the rash cleared rapidly. In June, 1950, the blood Wassermann reaction was once more negative and it remained so in November, 1950, January, 1951 and March, 1951 when he again defaulted from observation.

In November, 1957, however, he reported—at another hospital—with a request for a blood test, presumably because of a recent risk, and this was negative; 2 months later (in January, 1958) he was seen again with a 6 weeks' history of a rash on the arms and penis. Examination showed a slightly scaly, discrete macular eruption on both forearms and a similar single lesion on the glans penis. The blood Wassermann reaction was positive 1/256, and the Meinicke test strongly positive. There were no other clinical signs of syphilis. Risk was at first denied but later admitted. The rash cleared rapidly after treatment with P.A.M., becoming too faint to photograph a few days after the first injection, but in August, 1958, after two courses of P.A.M. (totalling 16·8 and 19·2 mega units) the blood Wassermann reaction was still positive 1/32. In September/October, 1958, he received a further 19·2 mega units P.A.M., but in May, 1959, the Wassermann reaction was still positive 1/8. A further 9·6 mega units P.A.M. was given between May and July, 1959, and in October 1959, the Wassermann reaction was once more reported as negative.

Discussion

It is indeed an odd coincidence that two patients who were treated for secondary syphilis in 1943 should both present in 1950 with fresh manifestations of the disease and still more of a coincidence that the same thing should happen 7 years later.

Relapse or re-infection? Re-infection or super-infection? After reviewing the so-called criteria of re-infection proposed by Halley and Wassermann (1928) and the much more complex criteria proposed by Stokes, Cole, Moore, O'Leary, Parran, and Wile (1931), Earl Moore (1947) concluded that "the determination of the fact of re-infection in man and its differentiation from relapse must rest on clinical impressions, on diagnostic 'hunch' rather than on certainty".

Case 1 would appear to be the less contentious. This man became sero-negative within 4 months of his first course of N.A.B. and bismuth, and he received three further courses of treatment and remained consistently sero-negative for over 2 years before defaulting from observation. What view should then be taken of the "seborrhoeic patches on the abdominal wall and thorax" with which he presented in 1950? Clearly, relapse can not be excluded, particularly as three of his arsenical courses consisted of the relatively ineffective Mapharside. The subsequent development in 1957 of a florid secondary syphilide inclines one to the belief that nevertheless both these episodes were the result of a fresh infection.

In Case 2 the evidence for relapse seems stronger. The original infection was less easily controlled; sero-relapse occurred in 1944 and persisted till 1946 and the subsequent period of observation was short. When seen in 1950 the patient was suffering from a morphologically "late" palmar syphilide. Moreover, although he subsequently proved to be a not entirely reliable witness, risk was denied. The renewed recurrence in 1958 of lesions again confined to the upper limbs and the penis, inclines one to the view that both these episodes constituted relapses of the original infection rather than fresh infections.

A further parallel between the two cases, which has not gone unnoticed but remains unexplained, was the rapid reversal of serological reactions in the first recurrent episode in both patients and the very much slower change to sero-negativity in the second recurrent episode. Would the simultaneous administration of bismuth have hastened sero-reversal in 1958? Or were perhaps the later episodes the result neither of relapse or simple re-infection but of super-infection? One will never be certain of this, for there is no method of knowing and, to quote Earl Moore again in the same connexion, "Hunches do not constitute proof".

Summary

Two patients with recurrent episodes of syphilis are described, and an attempt is made to decide whether these were due to relapse or re-infection.

REFERENCES

Halley, C. R. L., and Wassermann, H. (1928). *Arch. intern. Med.*, **41**, 843.

Moore, J. Earle (1947). "Penicillin in Syphilis", p. 127. Blackwell Scientific Publications, Oxford.

Stokes, J. H., Cole, H. N., Moore, J. E., O'Leary, P. A., Parran, T., and Wile, U. J. (1931). *Vener. Dis. Inform.*, **12**, 55.

Le mal périodique

Résumé

L'auteur décrit deux cas de syphilis récurrente et essaie de déterminer s'il s'agit d'une rechute ou d'une réinfection.