**ABSTRACTS**

This section of the Journal is published in collaboration with the two abstracting Journals, ABSTRACTS OF WORLD MEDICINE and OPHTHALMIC LITERATURE, published by the British Medical Association. The abstracts are divided into the following sections: Syphilis (Clinical, Therapy, Serology, Pathology, Experimental), Gonorrhoea, Non-Gonococcal Urethritis and Allied Conditions, Chemotherapy, Public Health and Social Aspects, Miscellaneous. After each subsection of abstracts follows a list of articles that have been noted but not abstracted. All subsections will not necessarily be represented in each issue.

**SYphilis (Clinical)**


Latent syphilis, which has lately assumed a position of increasing importance, has been the subject of much confused observation and thinking; in the authors’ opinion it would be more exactly termed "syphilis diagnosed solely by serological tests". The present study, reported from the Hôpital Militaire Desgenettes, Lyons, has the merit that all the patients were studied between 1951 and 1955 by the same observer and the serological tests all performed in one laboratory with the same technique and reagents. Further, the patients were examined repeatedly and meticulously in order to exclude any with clinical signs of syphilis. The standard serological tests employed included the Wassermann, Kolmer, and Kline tests, and the treponemal immobilization (T.P.I.) test was used to confirm the presence of syphilis or to exclude false positive reactions, which were found in fifty cases. Of the total of 233 cases of syphilis seen in the 5-year period, 71 ran the recognized clinical course, but 162 showed no clinical signs and the diagnosis was based on serological tests alone. Of the latter the T.P.I. test gave a positive result in 135 and doubtful in seven; it was not performed in twenty cases. Only the 135 patients with a frankly positive T.P.I. reaction are considered in this study.

The proportion of those diagnosed solely on the serological findings to the total number of cases, that is, 135 out of 206, is interesting, since in the 5-year period 1946-50 the proportion of latent to clinical syphilis was 27 cases to 185. There has therefore been both a relative and an absolute increase in latent (serological positive) syphilis. The majority of the patients were young recruits in the age group 19 to 25 years, with some older men aged 25 to 55. A high proportion (ninety) were Europeans and the most important factor in their history was overseas service. Previous treatment with antibiotics, likely to render syphilis latent, had been given in only a small number of cases (nine out of 83). The results of treatment were known in 75 of 135 cases; the serology became negative in 21 (28 per cent.), showed improvement in 27 (30 per cent.), no change in 26 (34·6 per cent.), and further deterioration in one (1·3 per cent.). The Vital factor in improvement appeared to be the duration of syphilis before treatment was started, which in most cases consisted of 15 mega units penicillin plus fifteen injections of bismuth.

The authors discuss the possibility of the existence of a type of syphilis which is devoid of clinical signs and which is associated with the decline in severity of the disease that has gradually occurred over a long period of time. In conclusion they reiterate their opinion that latent syphilis is becoming both relatively and absolutely more common.

Robert Lees


Since 1952 at the Central Institute of Dermatology and Venereology, Moscow, the electroencephalogram (EEG) has been recorded in 234 patients, of whom 140 had early sero-negative syphilis, 27 latent syphilis, seven tertiary gummata, and 69 neurosyphilis, recordings being made before, during, and after treatment. In those with sero-negative primary syphilis, the EEG was almost always normal. In patients with sero-positive primary syphilis, however, there were frequent changes of rhythm with prevalence of slow waves, but seldom real disorganization of the rhythm. Slow rhythms, sometimes with complete disappearance of "bio-potentials", were also observed in cases of late cerebral and cerebrospinal forms of the disease. Fast rhythms were a characteristic finding in cases of secondary syphilis (being more pronounced in recurrent cases than in early secondary cases), tertiary syphilis, tabes, and early forms of latent meningitis.

It was noted that treatment with antibiotics often improved the EEG or even restored it to normal, whereas treatment with arsenical preparations caused initial deterioration, improvement resulting only after the 5th or 6th injection, with consequent delay in the return of

After a review of the relevant literature, which constitutes the main part of this paper from the Institute of Clinical Dermatology of the University of Turin, the author records his own observations on the occurrence of the Herxheimer reaction in a series of seventeen cases of primary sero-negative syphilis. In every case a fever was treated with penicillin, and the patients were available, but not until later in the others.

The author suggests that, if primary syphilis in the pre-serological phase cannot be confirmed by microbiological means, the occurrence of a positive Herxheimer reaction is sufficiently specific to support the diagnosis until it can be proved by serological means. F. Hillman


The authors report the results of a long-term follow-up study of 490 fairly static out-patients who were treated for neurosyphilis at the Royal Victoria Hospital, Montreal, between the years 1936 and 1949. Of the 416 patients available, 156 were asymptomatic, but 86 had meningo-vascular disease, 63 tabes, 77 paresis or taboparesis, and 34 congenital syphilis. Fever treatment combined with pentavalent or trivalent arsenicals had been employed in the earlier cases, but later the treatment was with penicillin either alone or in combination with fever. [There is no indication of the number of patients treated by each method.]

During the observation period sixty patients (12 per cent.) died, but in only two cases was death attributable to neurosyphilis, most of the deaths being due to malignant disease, myocardial infarction, or cerebral haemorrhage. Only 16 per cent. of the total number were lost from observation, the average period of follow-up being 16 years. In all but three cases the "acute inflammatory phase", as shown by the findings in the cerebrospinal fluid (C.S.F.), responded to treatment; in the three exceptions retreatment with very large doses of penicillin was necessary. A positive Wassermann reaction in low titre persisted in a number of patients, and in about 5 per cent. of them the total protein content of the C.S.F. remained elevated with no other signs of activity in the C.S.F. or of clinical progression of the disease. The final outcome was satisfactory in over 50 per cent. of the 77 paretics and taboparetics and definitely unsatisfactory in 20 per cent., though relief of tabetic symptoms, especially lightning pains, was generally unsatisfactory. The end-results of treatment in the 86 meningo-vascular cases were very satisfactory, except in those in which irreparable brain damage due to thrombosis had occurred.

It is pointed out that severe cases needing institutional treatment were not included in this study.

G. L. M. McElligott


In Japan the incidence of syphilitic eye diseases was in the range of 2 and 3 per cent. of ocular patients before World War II. Immediately after the war, it increased to 3.86 per cent., but decreased later to reach its present level of 0-7 per cent.

Y. Mitsui


One case of syphilitoma of the orbit and two cases of anterior segmentitis of syphilitic origin are reported.

J. Rougier


Factors in the Development of Visceral Syphilitic Lesions: Late Diagnosis and Inadequate Treatment. (Facteurs d'élocaison des lésions syphilitiques viscérales: le dépistage tardif et les lacunes thérapeutiques.) Craps, L. (1958). Acta derm.-venereol. (Stockh.), 38, 208. 1 fig.
SYMPHILIS (Therapy)


In this paper from the Department of Health, New York City, the authors compare the results of treating:
1. 72 patients with primary and secondary syphilis with standard arseno-bismuth therapy (follow-up period 5 to 10 years),
2. 309 patients with 6 mega units penicillin followed by ten to twenty injections of oxathenasine hydrochloride and bismuth (follow-up period 2 years),
3. 147 patients with 4-8 mega units penicillin alone (follow-up period 2 years),
4. 100 patients with 6 to 9 mega units penicillin alone (follow-up period 5 to 11 years).

The cerebrospinal fluid was examined between 2 and 11 years after treatment and in all cases cardioscopy was carried out, with no evidence of cardiovascular disease being found.

On the basis of their experience, the authors consider [as do many other workers] that in early syphilis penicillin is far superior to other methods of treatment, not only because it gives the best results, but because it ensures that almost 100 per cent. of the patients will in fact complete their treatment. G. L. M. McColligott

SYMPHILIS (Serology)


The authors describe, from the Institute of Dermatology and Venereology, Bucharest, three series of experiments with artificial serological systems in which serological tests for syphilis were performed using different concentrations of protein, gamma globulin, and lipid. Increase in the concentration of total protein did not influence the result of the complement-fixation test and produced only minor variations in the flocculation test results. An increase in the concentration of gamma globulin led to an increased number of positive flocculation reactions, whereas an increase in the lipid concentration influenced the results of complement-fixation tests, but had no effect on those of the flocculation tests. When lipids and gamma globulin from syphilitic sera were included in the system the titres of positive complement-fixation and flocculation tests were increased.

Experiments are described which demonstrated the inhibitory action of riboflavin and heparin on serological systems.


At the University Dermatological Clinic, Jena, sera from 374 cases of suspected or proven congenital syphilis were tested in parallel by the Nelson treponemal immobilization (T.P.I.) test and six standard lipid-antigen tests for syphilis (S.T.S.). Of 21 “toxic” cases of untreated congenital syphilis, the T.P.I. test was positive in twenty and the serologically negative case was eventually thought not to be one of congenital syphilis. The results of the S.T.S. were variable, the Wassermann reaction, for example, being positive in fifteen and negative in six cases. Of 229 cases of untreated suspected congenital syphilis, the T.P.I. test was positive in 48, negative in 175, and doubtful in six; the next best results were obtained with the cardiolipin complement-fixation test, which was positive in 51, negative in 154, and doubtful in nine, out of 214 sera tested.

Short case histories are presented to support the view that the results of the T.P.I. test are in better accord with the history and clinical findings than those of the S.T.S. Of 74 cases of treated congenital syphilis, nearly one-quarter (eighteen) gave a negative T.P.I. reaction, and


some of these were in retrospect considered not to have been congenital syphilis. In one newborn infant, passive transfer of immobilizing antibodies was suspected and in fact the T.P.I. test result became negative 6 months after birth without treatment.

G. W. Csonka


This paper, from the Hygiene Laboratory of the University of Lyons, describes the methods employed in the extraction of five different antigenic substances from treponemes and the results of their use in serological tests for syphilis. The cultivable Reiter strain of Treponema pallidum was used as a suspension of intact organisms in phenol-saline, and protein fractions were prepared from it by cryolysis or disintegration of the organisms by ultrasonic waves followed by precipitation with ammonium sulphate. Antigens were also prepared from the virulent Nichols strain of T. pallidum by Portnoy and Magnuson’s method of extraction with sodium deoxycholate and by cryolysis followed by precipitation with ammonium sulphate.

Parallel complement-fixation tests were carried out by the Kolmer technique with these five treponemal antigens and a cardiolipin antigen on 202 sera which had been submitted to the laboratory for the treponemal immobilization (T.P.I.) test. The sera chosen for examination by this battery of tests formed two [highly selected groups: 127 came from known cases of syphilis at various stages of the infection, most of which had been treated or were under treatment at the time of testing, while the remaining 75 sera, some of which had given non-specific reactions to standard serological tests at other laboratories, came from patients who were considered to be non-syphilitic.

With the syphilitic group of sera the T.P.I. test was found to be the most sensitive, giving 91 positive reactions. With the antigens made from the Reiter treponeme the complement-fixation test gave 74 to 85 positive results, these tests being intermediate in sensitivity between the T.P.I. test and the Kolmer test with cardiolipin antigen, which was positive in 58 cases. The Kolmer tests with antigens from the Nichols treponeme were the least sensitive of those examined, giving only 39 to 49 positive results. The specificity of the treponemal antigens was considered to be very satisfactory. Kolmer tests with the protein antigen made from the Reiter organism by ultrasonic disintegration and with the preparation from the cryolysed Nichols strain each gave one positive result in the group of 75 non-syphilitic sera, compared with 4 such reactions given by the same test with cardiolipin antigen.

A. E. Wilkinson


At the University Hospital, Ann Arbor, Michigan, the treponemal immobilization (T.P.I.) test was carried out in parallel with the treponemal complement-fixation (T.P.C.F.) test described by Portnoy and Magnuson (J. Immunol., 1955, 75, 348; Abstr. Wild Med., 1956, 19, 442) on 394 sera from patients whose reaction to standard serological tests for syphilis (S.T.S.) had been positive, but in whom the diagnosis of syphilis was questionable on clinical grounds. The T.P.I. test was found to be slightly the more sensitive, giving 52 per cent. of positive results compared with 48 per cent. with the T.P.C.F. test. The results of the two tests agreed in 92 per cent. of cases. In tests on a further group of 127 patients with a tentative clinical diagnosis of syphilis, the T.P.I. reaction was positive in 77 cases and the T.P.C.F. reaction in 69; another group of 108 sera gave positive STS reactions which were thought to be non-specific; the T.P.I. reaction was found to be negative in 68 of these and the T.P.C.F. reaction in 75.

The reproducibility of the T.P.C.F. reaction was then examined by testing 88 sera in duplicate with two different batches of standardized T.P.C.F. antigen. The same results were obtained with the two antigens in 82 cases, but in the remaining six the results differed, being doubtful and negative respectively in three cases, 4+ and negative in one, and 4+ and 1+ in two. When duplicate tests were performed on aliquots of 61 sera on different days, but using the same batch of antigen for both, there was disagreement in three cases, in all of which the result of one test was doubtful and of the other negative.

Some preliminary studies were carried out with the Reiter protein antigen in complement-fixation tests. This was found to be considerably more active than the T.P.C.F. antigen, having a titre of 1,280 when two batches of the T.P.C.F. antigen had titres of 20 and 40 respectively against the same serum in 1:40 dilution. The results of comparative tests on a small number of sera are described and suggest that in spite of the apparent similarity of different batches of standardized T.P.C.F. antigen there may be differences between them which can be detected only by parallel tests against individual weakly reactive sera. It is recommended that these be performed in addition to the conventional checkerboard titration with pooled positive and negative sera. A. E. Wilkinson


Significance of Asymptomatic Sero-Positivity in Trinidad and Tobago with Special Reference to Yaws. GENTLE, G. H. K. (1957). W. Indian med. J., 6, 217. 1 fig., 2 refs.


GONORROHEA


A total of 211 strains of gonococci obtained from 190 male and ten female patients attending St. Bartholomew's and St. Thomas's Hospitals, London, were tested for sensitivity to penicillin, streptomycin, and sulphathiazole. The technique of isolation and testing and the control measures adopted are described. Sensitivity was determined by culture on chocolate agar plates containing serial dilutions of the drugs tested, the plates being incubated in candle-jars for 48 hours.

The minimum inhibitory concentration of penicillin was 0.064 unit or less per ml. for 162 of the strains tested, 0.128 unit per ml. for seventeen, 0.256 unit per ml. for sixteen, and 0.512 unit per ml. for five. For 158 strains the minimum inhibitory concentration of streptomycin was 4 µg. or less per ml. and for the remaining 42 tested it was 16 µg. per ml. All but one of 200 strains were sensitive to 8 mg. or less of sulphathiazole per ml.

At both hospitals the routine treatment was with a single injection of 300,000 units of procaine penicillin. Recurrence occurred in 25 cases. Penicillin-resistant strains (that is, strains needing 0.128 unit or more per ml. for inhibition) were isolated from 38 patients, of whom thirteen had a recurrence, whereas only twelve recurrences were seen among the remaining 162 patients. In ten of the 25 cases of recurrence further sensitivity tests were performed. From seven of these patients, at least six of whom were thought to be suffering from relapse rather than reinfection, the original resistant strain was again isolated. In one of the remaining cases a resistant strain had been replaced by a sensitive one, reinfection being probable, and in two both strains were sensitive.

The literature concerning the incidence of penicillin resistance in gonococci is reviewed and the authors contrast their findings with the lack of evidence from other sources that penicillin-resistant strains are emerging. They intend in future to use 600,000 units of penicillin for primary treatment and to treat clinical relapses with streptomycin and sulphonamides.

F. Hillman


U. M. Lynch


NON-GONOCOCCAL URETHRITIS AND ALLIED CONDITIONS


Spiramycin was given in 134 cases of non-gonococcal urethritis seen at St. Mary's Hospital, London. The average age of the patients, 38 of whom were coloured, was 29-4 years. There was a past history of venereal infection in 93 of the patients; other factors, such as history of intercourse, duration of discharge, and incubation period, were similar to those usually encountered in such series. Three treatment schedules were used:

(1) 1 g. spiramycin four times a day for 5 days (38 cases);
(2) 0.5 g. four times a day for 5 days (49 cases);
(3) 0.5 g. four times a day for 6 days (47 cases).

No serious side-effects were observed, but a few patients complained of diarrhoea, nausea, indigestion, or rectal soreness. Of the 134 patients, 123 were seen at varying intervals up to 3 months, the follow-up investigation including examination of the urine, microscopical examination of prostatic secretion, and serum tests for syphilis. Re-treatment was required in 25 cases; the author states
that “no effort was made to distinguish relapse from re-infection”.

No significant differences were observed between the results obtained with the three treatment schedules. The author considers that spiramycin compares favourably with the tetracyclines, and is superior to erythromycin, streptomycin, sulphonamides, penicillin, chloramphenicol, novobiocin, and aminitrozole. It is well tolerated and in the dosages given in this series of cases is a satisfactory drug for the treatment of non-gonococcal urethritis.

R. S. Morton

Involvement of the Nervous System in Reiter’s Syndrome.

A case of Reiter’s syndrome complicated by the involvement of certain cranial nerves and long spinal parts is described. The neurological signs were variable and varied with the activity of the urethral and joint disease.

D. Ainslie


MISCELLANEOUS


The author briefly describes 46 cases in which penicillinase was given in the treatment of reactions to penicillin, mostly to long-acting preparations of the antibiotic. The chief reaction was generalized urticaria, with and without swelling of the joints. Penicillinase was given intramuscularly in a dosage of 1 to 2 mega units, and within 1 to 3 days skin and joint lesions had cleared. Good results were obtained in 24 patients who received penicillinase only, and in twenty who also received antihistamine drugs and steroids. The response was poor in two patients given penicillinase a week or more after the reaction had started. There were no systemic toxic reactions, although a few patients complained of pain at the site of injection.

J. Ansell


Two Yaws Endemics in South-West Borneo. [In English.] Van Der Hoff, N. M. (1958). *Acta leidensia*, 28, 82. 1 fig., 13 refs.

