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)

Syphilitic Aortic Incompetence with Special Reference to Prognosis and Effect of Treatment. LEONARD, J. C., and SMITH, W. G. (1957). Lancet, 1, 234. 4 figs, 34 refs.

Most previous studies of the prognosis in syphilitic aortic disease have emanated from the United States and have included a considerable number of Negro patients. The study described here was undertaken in an attempt to determine the prognosis of syphilitic aortic incompetence as seen in Great Britain and to assess the value of different forms of treatment, including that with penicillin. The series consisted of 374 cases of aortic incompetence with no other valvular lesion diagnosed during the period 1926–55; 276 of these cases were seen at the London Hospital (93 cases) and the National Heart Hospital, London (183). In 360 cases the Wassermann reaction or Kahn test was positive, while in the rest there was other evidence of syphilis. About two-thirds of the cases (269) were males, two were Negroes, one was Chinese, and the rest were of European origin; the mean age was 54 yrs and the maximum incidence (134 cases) was in the 6th decade of life.

In 111 of the cases (30 per cent.) there was a history of primary syphilis or gonorrhoea, and the mean interval from primary infection to diagnosis of aortic incompetence was 31 yrs (range 8 to 52 yrs). The commonest symptoms were dyspnoea on exertion and cardiac pain. In eighteen cases there was marked loss of weight and in these the prognosis was worse. Systolic thrills were observed in 42 cases who had no evidence of aneurysm, an Austin Flint murmur was noted in 29, and auricular fibrillation in 26 cases. The erythrocyte sedimentation rate was raised in many cases, especially if no treatment had been given, but effective treatment lowered the rate slowly over many months. Calcification of the ascending aorta was noted in 22 (35 per cent.) out of 64 cases in which the radiographs were personally examined. Expected abnormalities in the electrocardiogram were seen in the majority of cases. At the time of the report, 222 of the patients were dead, 102 were alive, and fifty (13 per cent.) could not be traced. The mean time of survival after diagnosis among those who had died was 48 months. Calculation of the percentage of survival by the life-table method showed that 75 per cent. survived for 1 yr, 54 per cent. for 5 yrs, 32 per cent. for 10 yrs, and 14 per cent. for 20 yrs after diagnosis, females having a better prognosis than males after the 1st year. In 49 cases there were no symptoms at the time of diagnosis and of these 42 (85 per cent.) were alive 5 years afterwards. Of 180 cases with cardiac pain, 121 died after a mean survival time of 73 months from the time of onset of angina. Heart failure was present in 111 cases, and the mean survival time of the 89 such patients who died was only 18 months. The impression that patients with a low diastolic blood pressure have a poorer prognosis was confirmed. The prognosis was found to grow steadily worse with increasing age, heart failure being more frequent in older patients. As stated, the prognosis was better in females, the mean survival time for all men being 42 months, whereas for all women it was 66 months. [On the whole the women were younger than the men and the authors have not separated the effects of sex, age, and heart failure on survival.]

Full details are given of previous treatment and its relation to survival time [but the various groups are small and little statistical correlation is attempted]. After 10 yrs, 60 per cent. of a fully treated group (total 28) survived, in contrast to 31 per cent. of an inadequately treated group (27 patients) this difference being significant. The authors found no evidence of a prognostic difference between patients adequately treated with either arsenic or bismuth alone and those treated with penicillin in addition. Patients treated with penicillin alone seemed to fare slightly worse. The authors issue the caution that their conclusions are to be regarded as provisional.

David Friedberg

Diagnostic Value of Optic Atrophy in Syphilitic Patients with regard to a Parietal Meningioma. ( Valeur diagnostique de l'atrophie optique chez les syphilitiques a propos d'un meningiome pariétal.) MASSEBOEUF and OGER (1956). Maroc méd., 35, 141. 1 fig.

In a syphilitic native with optic atrophy, the diagnosis of meningioma was made by x ray. Surgical treatment was successful.

S. Vallon
ABSTRACTS


This is a tribute forming part of a commemoration number on the 50th anniversary of the Wassermann reaction. W. E. S. Bain


From the National Institute of Venereology, Caracas, Venezuela, the author presents the result of a careful study of 114 patients, 87 men and 27 women, with syphilitic aortic insufficiency who were treated with 10 mega units penicillin given by intramuscular injection during 17 days and observed for an average period of 13-3 months. It is mentioned that, among 756 patients with cardiovascular syphilis who have been treated with penicillin, no case of Herxheimer reaction or of therapeutic paradox has occurred.

The results of the studies of functional capacity, circulation time, heart size, intensity of the diastolic murmur, and of quantitative Kahn tests are tabulated separately for two groups of patients, those aged 20 to 39 yrs and those aged 40 yrs and over. Functional capacity was improved in both groups and the diminution in the strength of the reaction to the Kahn test was statistically significant in the younger group. The time of the arm-to-lung circulation showed improvement in both groups, but the time of the arm-to-tongue circulation was unaffected by the treatment, as was also the transverse diameter of the heart and the intensity of the early diastolic murmur. Among the patients studied were four pregnant women, all of whom had normal deliveries.

[The follow-up period is short, but the author sets out clearly the good results that can be obtained from treatment with penicillin. However, the question of how much of the improvement can be attributed to general medical care cannot be answered.] Eric Dunlop


Hyptertrophic Form of Tabetic Arthropathy. (Forma hipertrofica da artopatia tabida.) FORTES, A. B. (1957). *Hospital (Rio de J.*)*, 51, 173. 7 figs, bibl.


SYPHILIS (Therapy)


An analysis is reported from Rigshospitalet, Copenhagen, of the results of treatment of neurosyphilis over the period 1937–52. Of 277 patients (166 males and 111 females), 183 were given fever therapy (induced by injection of *Escherichia coli* vaccine), 67 received fever therapy with penicillin, and 27 were given penicillin only. It is stated that “as an adjuvant to fever therapy injections of arsenic and bismuth were given throughout the period in the commonly employed dosages”.

The analysis is exhaustive and not suitable for abstracting, but the following points from the authors’ conclusions are of particular interest. In 88 per cent. of 150 patients the spinal fluid was inactive after treatment. In eleven out of eighteen patients with optic-nerve atrophy there was no further progression of visual disturbances. Recurrences were seen only in patients with severe neurosyphilis and did not appear to be related to “the number of fever attacks reaching 40° C”. There were no recurrences in patients in whom fever was induced by means of the hypertherm. The addition of arsenic and bismuth to the treatment regimen did not ensure continued negativity of the serum or spinal fluid. In fifty of the 65 patients who died before the time of follow-up, death was due to causes other than neurosyphilis. Mortality from fever therapy was 2 per cent. The duration of symptoms before treatment was a valuable prognostic factor; 27 out of 43 patients admitted within 6 months of the onset of symptoms were cured or improved, compared with 42 out of 105 who had symptoms for more than 6 months.

G. L. M. McElligott


Between 1940 and 1946 approximately 500,000 members of the U.S. Armed Forces had acquired or had been treated for syphilis. The authors, on behalf of the Veterans’ Administration, undertook a study of the current status of a proportion of these cases. The actual
investigations were conducted by State and local health departments in cooperation with the U.S. Public Health Service; as it was impossible to investigate all the 500,000 cases only the following patients were included:

1. those whose cerebrospinal fluid (CSF) had not been examined;

2. those with previously recorded positive or doubtful findings in the CSF;

3. those who had received "inadequate" treatment. As a result of this selection the number of patients was reduced to some 122,000.

The follow-up programme was carried out for a period of approximately 3 years from 1950, a total of 122,461 questionnaires being sent to State health departments, of which 90,293 (73.7 percent) were returned, and from these 81,715 patients were selected for further investigation. Of this number, however, 45 percent could not be traced. 12 percent were unwilling to submit themselves to examination, 3 percent were still in military service, 0.7 percent were dead, and 5 percent were not investigated for various other reasons.

The remaining 34 percent (27,786 subjects) were located, all of whom underwent blood tests and almost half of whom had examination of the CSF. In 18.8 percent a serological test for syphilis (STS) gave a positive result and in 2.7 percent a doubtful result. The CSF reaction was positive or doubtful in 4.2 percent of those examined. The sample selected for final analysis consisted of those "who had not had a lumbar puncture in the Services", and who had been diagnosed as having primary or secondary syphilis; with all these limitations the final group numbered 8,317. Of the 140 with a positive CSF reaction 49 (39 percent) had a negative STS reaction. In general the longer the period between initial treatment and follow-up, the higher the percentage of those with a positive CSF reaction. Patients with more recent infections had been treated with penicillin, those with the earliest had received arsenoxide and bismuth, while the two methods of treatment had overlapped in those examined 6 to 8 years after treatment. Of those treated with penicillin 2.88 percent had a positive CSF reaction, compared with 2.07 percent of those treated with arsenoxide and bismuth, suggesting that penicillin was no more effective in preventing neurological involvement than the older treatment. Differences in the types of penicillin used at varying periods are discussed. Among patients treated with "penicillin K", the rate of neurological involvement was 3 percent as against 0.4 percent among those treated with benzylpenicillin.

On the basis of these findings it is estimated that at the present time a minimum of 15,000 "veterans" of World War II would show evidence of neurosyphilis in the CSF.

Douglas J. Campbell

SYPHILIS (Serology)


The interpretation of the results of serological tests on the clinically healthy child of a syphilitic mother raises serious therapeutic and prophylactic problems. The author states that when the Wassermann reaction (WR) is positive in both mother and child, the Meinicke reaction (MKR II) will be negative in the non-infected child even though it is positive in the mother, since the reagin concerned is not transmitted transplacentally. On the other hand, the MKR II is the first reaction to become positive in adult infection, and, assuming that the evolution of intra-uterine infection runs parallel with that of the adult, a positive MKR II in the new-born infant, even with a negative WR, would indicate congenital syphilis.

The serological findings in a series of 202 cases of maternal syphilis are reported here from the Paediatric Clinic of the University of Hamburg, the results being presented in tabular form. The MKR II was positive in 52 (84 percent) of the 62 new-born children with signs of congenital syphilis and in twelve (8 percent) of the 140 children who had no clinical signs of the disease, and it is assumed that these 64 infants had congenital syphilis. Proof is impossible to furnish, however, because all the children were given at least one course of prophylactic treatment, though some collateral evidence is provided by the fact that on treatment the WR titres fell rapidly in the MKR II-negative children and very much more slowly in those with a positive MKR II. The importance of maternal treatment during pregnancy is evidenced by the fact that all but one of the children with positive clinical signs or serological reactions or both were born of untreated or insufficiently treated mothers. It is emphasized that a negative MKR II in the child of an untreated syphilitic mother should not be held to exclude congenital syphilis.

Since the WR with cardiolipin antigen is not a satisfactory means of distinguishing passively transmitted reagins from those due to active infection of the child, while the transplacental transmission of treponemal immobilizing antibody has also been demonstrated, it is suggested that the MKR II should invariably be carried out in the investigation of congenital syphilis.

F. Hillman


At the Institute of Hygiene of the University of Kiel, 4,837 antenatal specimens of serum have been tested for syphilis since November, 1953, by means of the treponemal immobilization test in addition to the classic reactions. In 101 cases (2.06 per cent.) the results were
positive, and eighteen (0·37 per cent.) of the children born were sero-positive at birth. Intensive family investigations in these cases have since resulted in the discovery of further untreated cases of syphilis. The authors draw attention to the fact, reported by various workers, that whereas the incidence of acquired syphilis has apparently decreased substantially during the last 10 yrs. that of congenital syphilis has decreased more slowly. In order to improve this state of affairs it is suggested that more widespread use of the routine antenatal blood test should be made, and that maternity benefits under social security schemes should be made conditional on the patients undergoing three such tests during pregnancy, the first preferably in the second month.

G. W. Csonka


The antigens which are most commonly employed for serological reactions in the diagnosis of syphilis are usually prepared from beef heart and the active part of the antigen includes phospholipids and lecithins activated by cholesterol. This paper describes attempts made at the Central Dermato-Venerological Institute, Moscow, to produce antigens from vegetable sources, tests being made with such substances as soya flour, wheat and potato flour, almonds, arachis, and walnuts. It was established that phospholipids are indeed present in those substances, but in lesser amounts than in animal muscle, and that lecithin is entirely absent. The technique of the extraction of phospholipids is described.

As a result of the study, antigens were prepared consisting of one part of phospholipid (extracted from plants), 2·5 parts of lecithin (extracted from beef heart), and fifteen parts of 1 per cent. solution of cholesterol. These antigens were used in carrying out the Wassermann reaction (in parallel with the usual antigens) and showed high sensitivity. In testing 1,410 sera with antigen from soya flour, results identical with those by the usual method were obtained in 97·88 per cent. of cases. With almond antigen the results agreed in 98·38 per cent. of 740 sera tested, but with potato-flour antigen agreement was achieved in only 90·7 per cent.

H. Makowska


Many workers have tried to find a substitute for the technically difficult treponemal immobilization (TPI) test for syphilis. This paper describes a treponemal complement-fixation (TCF) test devised and carried out at the Hebrew University–Hadassah Medical School, Jerusalem, by the Kolmer technique, using half the standard volumes of reagents. The antigen used was a suspension of the Nichols strain of Treponema pallidum in 0·25 per cent. phenol–saline containing ten to fifteen organisms per high dry field. The test was performed on 49 sera on which the TPI test had already been carried out. The TCF test gave positive or doubtful reactions on 29 out of thirty sera from syphilitic patients whose TPI reactions were all positive, but was negative in one case, a patient with treated latent syphilis. Negative TCF test results were obtained on all but one of nineteen non-syphilitic patients with negative TPI test results. [In the exceptional case, the TPI test result bordered on the doubtful range of immobilization.] In tests on a further 26 syphilitic sera the TCF test was more sensitive than the Kolmer test and gave higher titres in quantitative tests. Sera from 25 patients with a variety of skin diseases were examined; all gave negative Kolmer reactions, but eight gave positive TCF reactions, the remainder being negative. After absorption of the positive sera with rabbit erythrocytes the TCF reactions became negative, but it was shown that this procedure did not influence positive TCF reactions with syphilitic sera. As non-specific reactions occur with this test, it may be necessary to absorb sera with lipid antigen before testing.

The author suggests that the antibody detected by the TCF test is similar to, if not identical with, the immobilizing antibody.

[It is surprising that such a weak suspension of treponemes should be such a good complement-fixing antigen.]

A. E. Wilkinson

Results of the First Thousand Examinations of Sera from Mothers and Children, with and without Previous History of Syphilis, attending the State Paediatric Services in Seville. (Resultados obtenidos del primer millar de sueros analizados de madres y niños, con antecedentes lúeticos conocidos o ignorados, de entre los asistentes a los Servicios estatales de Puericultura de Seville.) Morales, J. L., Mir, J. C., and Fernandez, J. B. (1957). Rev. Sanid. Hig. publ. (Madr.), 31, 71.


GONORRHOEA


After 4 years of freedom from infection, ten cases of ophthalmia neonatorum were notified in Ilford during 1956. These are attributed to a mild staphylococcal infection.

P. D. Trevor Roper
The authors show that despite state rulings on prophylaxis the matter seems to be left largely to the choice of the hospital staff, with the result that silver nitrate has largely given way to newer agents such as penicillin. New cases of ophthalmia neonatorum reported during 1950–1954 make it clear to the authors that the whole question of prophylaxis should be re-assessed.

M. H. T. Yuille

In a therapeutic trial at Karolinska Hospital, Stockholm, patients with acute gonorrhoea were given a single intramuscular injection of either 0·3 mega unit penicillin or 0·5 g. streptomycin, 78 patients receiving penicillin and 76 streptomycin. The patients were Service recruits aged 19 to 21 yrs. Tests of cure, which included culture and smear, were carried out once a week for 4 to 5 weeks. There was one relapse in each treatment group, but a single repeat injection of the same drug achieved a cure in both instances. The mean incubation period for the series was 6·1 days, the shortest period being a matter of hours and the longest 40 days.

G. L. M. McElligott

NON-GONOCOCCAL URETHRITIS AND ALLIED CONDITIONS


CHEMOTHERAPY


PUBLIC HEALTH AND SOCIAL ASPECTS


MISCELLANEOUS

