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), Gonorrhea, 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)

A study was undertaken at the London Hospital with the aim of assessing the value of the electrocardiogram (ECG) in the diagnosis of syphilitic heart disease and in particular the effect on the ECG of stenosis of the coronary orifices by syphilitic aortitis. It was found that the ECG was abnormal in fifty out of 72 such cases. Of the 34 patients with "true cardiac pain", 33 had an abnormal ECG. Among the eighteen patients without pain there were no cases in which the changes in the ECG were "indisputably the outcome of cardiac ischaemia". In this group ten had normal tracings, one had right bundle—branch block, five had left ventricular preponderance in the presence of aortic incompetence (one with auricular fibrillation), and two had auricular fibrillation without other abnormalities except those due to the effects of digitalis.

Although the ECG is abnormal in a high proportion of cases of syphilitic heart disease with cardiac pain, it is stressed that positive evidence of cardiac ischaemia is often difficult to obtain. This is attributed to the rarity of abnormal Q waves in the tracings and the frequent presence of left ventricular preponderance. It is concluded that when syphilitic aortitis is discovered or suspected the examination of the case is incomplete if it does not include an ECG, as this often reveals involvement of the orifices of the coronary arteries by aortitis.

William A. R. Thomson


Gastric Syphilis. (Sífilis gástrica.) Celso Biagioni, J. (1958). Hospital (Rio de J.), 54, 623. 5 figs, 18 refs.

SYphilis (Therapy)

The author reports, from the University Neurological Clinic, Turin, his preliminary experience in the treatment of tabetic pains by intrathecal injection of corticosteroids. After rapidly reviewing the various theories propounded regarding the site and nature of the posterior-root lesion in tabes dorsalis as well as some of the medical and surgical methods which have been applied in the treatment of tabetic crises and lightning pains, he presents brief case histories of ten patients with typical tabetic lightning pains whom he has treated with intrathecal prednisone. The method consists in the initial introduction of 25 mg. of prednisone into the lumbar theca, followed by injections of 50 mg. by the same route three times a week for 4 weeks.

In four of the ten cases complete relief from tabetic pain was achieved after the first few injections and was still present at the time of follow-up 3 months later. Partial improvement was achieved in three further cases, but in the remaining three the treatment had no effect in spite of an increase in frequency of intrathecal injections. In no case were the physical signs altered by the treatment, nor was there any effect on the constitution of the cerebrospinal fluid or change in the Wassermann reaction. No deleterious side-effects either on electrolyte metabolism or on the general condition of the patient were observed. The author concludes that intrathecal corticosteroid therapy can have a beneficial effect in some cases of tabes dorsalis, not only by producing symptomatic relief from pain, but possibly also by its direct effect on the specific inflammatory process involving the posterior nerve roots. He suggests that it should be employed in conjunction with other established methods of treatment and that it is certainly worth a trial in cases which have proved resistant to these other forms of therapy.

J. B. Stanton
Criteria for the Assessment of the Results of Treatment in Neurosyphilis. (Considerações sobre os critérios para a avaliação dos resultados terapêuticos na neurosifilis.) FURTADO, T. A. (1958). Hospital (Rio de J.), 54, 639. 13 figs. 45 refs.


SYPHILIS (Seroology)


Investigations previously reported from the Walter and Eliza Hall Institute of Medical Research, Melbourne, have shown that in various chronic diseases the serum contains complement-fixing antibodies against antigens prepared from human tissues, particularly liver and kidney (GAJDUSEK, Nature, 1957, 179, 666; Abstr. Wild Med., 1957, 22, 245). In a further study of this autoimmune complement-fixing reaction the authors have examined a large number of specimens of serum from healthy subjects and patients suffering from various diseases.

Of 486 normal subjects, only 3 per cent. gave a positive reaction (that is, in a titre of 8 or more) and in none did the titre reach 64. Among 28 cases of disseminated lupus erythematosus there were 22 positive reactors, seven of them in a titre of 64 or more; of the six patients with a negative reaction, four were either in remission or had very mild disease and in two the lack of immunological reactivity might have been due to the presence of uraemia and a low serum γ-globulin content. Of 106 cases of acute viral hepatitis, 35 gave a transiently or weakly positive reaction (a titre of 4 or 8), while the percentage of positive reactors was the same as that in normal individuals. There were five positive reactors among 24 cases of chronic active hepatitis, presumably post-viral, and four among ten cases of lupoid hepatitis. No striking increase in reactivity was noted in rheumatic fever (11 cases), rheumatoid arthritis (26), dermatomyositis (5), or glomerulonephritis (23). Of 43 patients with carcinoma, four gave a positive reaction, and three of these had gastric carcinoma; in one the reaction became negative after resection of the tumour. The incidence of positive reactions was relatively rather high in patients with blood disorders—three out of 35 with anaemia (all types) or leukaemia, three out of ten with multiple myeloma, and two out of fourteen with macroglobulinaemia. In five cases in which the serum reacted in high titre it was possible to carry out tests against antigens prepared from the patient’s own tissues, and in every case reactivity to these antigens was found to be low or absent.

Two possible mechanisms for the production of auto-antibodies are discussed:

1. Cell damage might alter a cell component so as to make it antigenic or might allow normally inaccessible body components to come into contact with antibody-forming tissue.

2. An alteration in the antibody-forming tissues, possibly a somatic mutation, might lead to normally accessible body components being treated as foreign, or to the manufacture of abnormal globulins having antibody activity as an accidental consequence of their structure.

M. C. Berenbaum


It is generally agreed that the treponemal immobilization (T.P.I.) test for syphilis gives a positive result with the cerebrospinal fluid (C.S.F.) only when the result is positive also in the serum, the test being considerably less sensitive in the C.S.F. than in the serum. In cases of neurosyphilis in particular a positive T.P.I. reaction in the serum is frequently accompanied by a doubtful or negative result in the C.S.F.

Stating that so far no case has been reported in the literature in which the reaction was positive in the C.S.F. and negative in the serum, the authors, writing from the Free University of Berlin, report just such a case which occurred in a 65-year-old woman who developed clinical signs of tabs dorsalis 40 years after the primary infection. Despite three courses of penicillin in 3 years the condition continued to progress. The results of standard serological tests for syphilis fluctuated, being only weakly positive on occasions, but the content of cells and protein in the C.S.F. showed increasing abnormality despite treatment. Tests showed that the T.P.I. reaction was negative in the serum but positive in the C.S.F. The authors therefore conclude that this paradox may occur in rare cases, and that the finding of a negative T.P.I. reaction in the serum should not prevent an attempt being made to demonstrate immobilizing antibody in the C.S.F. in selected cases.

R. D. Catterall


From the Venereal Disease Research Laboratory, U.S. Public Health Service, Chamblee, Georgia, a method is described of preparing a stable antigen emulsion of standard reactivity for use in the V.D.R.L. slide, tube and cerebrospinal-fluid tests for syphilis. A stock 1 per cent. alcohol solution of benzoic acid is prepared by dissolving 1 g. benzoic acid (reagent grade) in 100 ml. of absolute ethyl alcohol and stored in a glass-stoppered flask at 6° to 10°C. V.D.R.L. antigen emulsion is prepared in 10-ml. volumes as described in the standard method. To each 10-ml. volume of freshly prepared material 0·1 ml. of the 1 per cent. solution of benzoic acid is then added so that the final concentration is 0·01 per cent.
Each aliquot of this stabilized emulsion is tested with control sera and all of the standard reactivity are pooled. The pool is dispensed in convenient volumes of 5 or 10 ml in screw-capped vials. The stabilized emulsion was shown to be satisfactory for use on seven consecutive days after storage at 6°C to 10°C. For periods of 4 to 6 weeks: in one instance an unopened vial was refrigerated for 4 months and found to be of standard reactivity when tested. A comparison of the results of 570 tests with the freshly prepared and with the stabilized emulsion by the slide-test technique indicated that benzonic acid does not affect reactivity levels and was the most satisfactory of a number of substances tested.

R. R. Wilcox

Fractionation of TPI Antibodies and Wassermann Reagins.


Paper electrophoresis was carried out at the State Bacteriological Laboratory, Stockholm, on sera from five patients with secondary or late syphilis by the method described by Laurell (Acta path. microbiol. scand., 1955, Suppl. 105), the strips being cut transversely into pieces from which the protein fractions were then recovered by centrifugation. The treponemal immobilization (T.P.I.) test and the Wassermann reaction (using cardiolipin and cholesterolized human heart as antigens) were performed quantitatively on the fractions thus isolated.

Treponemal immobilizing antibody was found to migrate with the γ-globulin fraction, while the Wassermann reagins were located in the γ- and β-globulin fractions, some sera showing two distinct reagin peaks. The T.P.I. antibody is therefore distinct from the reagin migrating with the β-globulins. Its relationship to the Wassermann antibody found in the γ-globulin fraction, however, remains uncertain, as the method of separation did not yield sufficient material for absorption tests to be carried out.

A. E. Wilkinson


In experiments carried out in the Laboratory of Hygiene of the Canadian Department of National Health and Welfare, Ottawa, in an attempt to determine the chemical groupings responsible for the reactivity of the antigens used in the serodiagnosis of syphilis various pure phospholipids, all but one being synthetic, were substituted for cardiolipin in the V.D.R.L. microfoculation and Kolmer complement-fixation tests. It was established that both choline and fatty acids were essential for the antigen-antibody reaction, while a small number of fatty-acid radicals reduced sensitivity. The only synthetic compound which showed any promise as a substitute for natural cardiolipin was the sodium salt of β-(dioleoyl)-glycerophosphoric acid. Similar studies in which similar but less complex substances were substituted for lecinthin showed that compounds lacking the complete lecinthin structure were unsatisfactory though antigens containing dimyristoyl, palmitoleoyl, and dioleoyl lecinthins were weakly reactive. It was found that an antigen containing dioleoyl lecinthin, β-(dioleoyl)-glycerophosphoric acid (sodium salt), and cholesterol was the most reactive of the antigens tested in both the serological tests.

Allene Scott


This paper from the University Medical Clinic, Marburg, reports the finding of a biological false positive reaction to standard serological tests for syphilis (S.T.S.) in 150 sera out of a total of 4,679 specimens examined, an incidence of 3.2 per cent. In the majority of cases the phenomenon was acute. The author considers that the commonest precipitating factors responsible for the acute reaction are broncho-pneumonia of varying aetiology, active pulmonary tuberculosis, glandular fever, subacute bacterial endocarditis, infective hepatitis, hepatic cirrhosis, rheumatoid arthritis, and certain forms of thrombophlebitis. A battery of serological tests was used in all cases, but the treponemal immobilization test in only a few. Of these patients who were classified as chronic false positive reactors—the phenomenon being present for a period of at least 6 months—one had disseminated lupus erythematous, one chronic hepatitis, and the third thrombophlebitis in the legs. The results of the various serological tests employed are described in detail (but clinical information about the patients is scanty).

The author (rightly) points out the importance and difficulty of distinguishing between cases of latent syphilis and those giving a false positive reaction. He also stresses the grave consequences, particularly in pregnant women, of diagnosing syphilis in a patient in whom such an infection has never occurred.

R. D. Catterall


NON-GONOCOCCAL URETHRITIS AND ALLIED CONDITIONS


PUBLIC HEALTH AND SOCIAL ASPECTS

Principles and Methods of Control of Venereal Disease with Special Reference to the Campaign in New Mexico. (Los principios y métodos de control de las enfermedades venéreas con especial referencia a las actividades del programa en nuevo mexico.) DJANG, A., KILCREASE, D. T., McBREEN, M., and LELAND, S. J. (1959). Bol. Ofic. sanit. panamer., 46, 32. 2 figs.


MISCELLANEOUS


CORRECTION

In the article by Alice Reyn, Bent Korner, and Michael Weis Bentzon, which appeared in the December issue (Brit. J. vener. Dis. (1958), 34, 227);

P. 228, col. 2, para. 3, ll. 5 and 6, for 3 µg. and 1 µg. please read 3 mg. and 1 mg.

Describing a form of primary genital candidiasis which has been observed with increasing frequency in young adults, the authors state that Candida albicans is found in some 20 to 30 per cent. of healthy persons. A description is given of recent methods of isolation and identification of this fungus, which is usually considered to be “an organism of opportunity”, that is, it profits by biological disturbance of the tissues, as in endocrine dysfunction or after treatment with antibiotics.

In the condition now described vulvo-vaginal infection is usually the first part of an epidemiological cycle. Thus in certain conditions, and especially after antibiotic therapy, the drug-resistant strains of Candida tend to flourish as the drug sensitive micro-organisms are killed off. Also, a natural increase in the virulence of the fungus may occur, so that from being formerly mainly saprophytic it now becomes pathogenic; this change is very commonly observed in the female genital tract. The authors then describe typical clinical cases of balanoposthitis, eczema genitalis, and vulvitis, in all of which itching was a prominent symptom. Suspicion was aroused by a history of a similar condition in the sexual consort or of previously treatment with antibiotics, given either locally or parenterally. Microscopical examination and culture of the exudate confirmed the diagnosis in these cases.

The treatment advised for males is application of an ointment containing nystatin, for females the use of vaginal pessaries of nystatin combined with oral treatment with this drug. The authors stress that it is important to treat both partners simultaneously, to avoid so-called “ping-pong” reinfection, and to observe the patients for at least a week for signs of recurrence or reinfection.

Robert Lees

