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)


Tertiary syphilis is still an important problem in the north of France. This is thought to be the result of inadequate treatment during the epidemic of the disease which occurred during the war of 1914-18. The authors working at the Clinic of Dermatology and Syphilology, Lille, have studied 617 cases of late tertiary syphilis—444 affecting the nervous system, 96 the aorta, and 77 the eyeball—treated at the Lille hospitals since 1945. In only 12 per cent. could a history of primary or secondary manifestations be established. The number of cases of tertiary syphilis detected annually in the district at the time of the report (March, 1962) was 27, or some 25 per cent., of what it was 20 years before. The proportion of cases due to neurosyphilis has greatly increased. In the group of general paralysis of the insane, forms with dementia or megalomania are less frequent, those with depression or confusion more frequent. The proportion of cases of cerebrovascular syphilis, of syphilis of the spinal cord, and cardiovascular syphilis with aeurysm or aortitis, has fallen. The number of cases with positive serological evidence of syphilis but relatively little clinical evidence is now much higher. In the series considered here the treponemal immobilization (T.P.I.) test was positive in all but 2 patients (one with tabs who had received prolonged treatment and one with general paralysis who had had malaria therapy).

As regards treatment the authors favour the use of mercuric cyanide and bismuth in addition to penicillin. They cite twelve patients in whom treatment with penicillin, sometimes in high dosage, was given during the second year of the infection, but who later developed tertiary manifestations. Of the 617 cases, 27 per cent. had 10 million units of penicillin, 35 per cent. had 11 to 30 million units, 30 per cent. had 31 to 100 million units, 9 per cent. had over 100 million units, and 283 had mercuric cyanide or bismuth in addition to penicillin. Pyretotherapy, in association with chemotherapy or metals, was used in 93 cases of syphilis of the nervous system. In tabs there was little improvement in symptoms due to sclerotic or degenerative lesions, but improvement did occur in lightning pains, visceral crises, and ataxia. In general paralysis, the mental state improved in 56 per cent.; 40 per cent. of the patients in mental hospitals could be discharged, and 64 per cent. of those treated outside were able to resume their work. The results in cardiovascular syphilis were less favourable, but improvement was obtained in over 50 per cent. of the cases of anginal attacks and precordial pain. Only 17 per cent. of cases of cardiac dysrhythmia and 8 per cent. of cases of dyspnoea improved. In interstitial keratitis, better results were obtained than previously by giving local treatment with corticosteroids in addition to general treatment with penicillin and mercuric cyanide. In none of the cases did the T.P.I. test become negative. Pleocytosis in the cerebrospinal fluid was markedly reduced by treatment. The higher it was to begin with, the greater was the reduction. There were five Herxheimer reactions after penicillin, four of them fatal. The authors consider that previous administration of mercuric cyanide and of prednisone would reduce the incidence of this complication.

Among the 93 patients who had pyretotherapy there were 7 deaths.

J. A. Farfor


The authors report a detailed scrutiny of 29 cases of tabetic arthropathy seen in the department of rheuma-
logy of a Paris hospital since 1950. In twelve of the cases, at least four of the following clinical features of tabes were present: abolition of tendon reflexes, ataxia and Rombergism, Argyll Robertson pupil, disturbance of deep sensation, lightning pains, visceral crises. In fifteen cases at least two of these features were present. In one case only was the osteo-arthropathy the sole objective sign of the disease. [No serological investigations are reported.] In all the cases the presence of tabes had been unsuspected and was discovered only on examination at the rheumatology centre. In fifteen of the cases multiple joint involvement supported the view of Fox and Alajouanine that arthropathy occurs in tabetics who have a predisposition to joint disease. The two striking points which emerged from the study are that pain does occur in tabetic arthropathy, and that the differential diagnosis between tabetic arthropathy and osteo-arthritis may be difficult. In eighteen of the cases the tabetic arthropathy was situated in the knee, and in eleven of these it was on account of pain that the patients attended. The pain had been present for, on an average, 3 to 5 years, and had generally been subject to remissions. The vertebral column was affected in eight of the 29 cases. Arthropathy is a relatively rare feature of tabes (5 to 10 per cent. of cases). Osteoarthritis, on the other hand, is a common disease, and may well occur in tabetic subjects. The differential diagnosis may be especially difficult in atypical cases of tabetic arthropathy, in which pain is a marked feature, while other clinical evidence of tabes is lacking. The mode of onset, and the presence or absence of joint deformity and of stiffness and limitation of movement, are criteria of doubtful value. Of greatest help are the x-ray appearances, and the mode of evolution. In tabetic arthropathy the characteristic radiological finding is condensing osteolysis with ill-defined limits, while the evolution of the disease is much more rapid than that of osteo-arthritis.

J. A. Farfor

** ABSTRACTS **

** Joint Involvement Supported by Arthropathy.**

The rheumatology service of the hospital reported the presence of pain in some cases. In all cases, the presence of tabes had been unsuspected and was discovered only on examination at the rheumatology centre. In fifteen of the cases multiple joint involvement supported the view of Fox and Alajouanine that arthropathy occurs in tabetics who have a predisposition to joint disease. The two striking points which emerged from the study are that pain does occur in tabetic arthropathy, and that the differential diagnosis between tabetic arthropathy and osteo-arthritis may be difficult. In eighteen of the cases the tabetic arthropathy was situated in the knee, and in eleven of these it was on account of pain that the patients attended. The pain had been present for, on an average, 3 to 5 years, and had generally been subject to remissions. The vertebral column was affected in eight of the 29 cases. Arthropathy is a relatively rare feature of tabes (5 to 10 per cent. of cases). Osteoarthritis, on the other hand, is a common disease, and may well occur in tabetic subjects. The differential diagnosis may be especially difficult in atypical cases of tabetic arthropathy, in which pain is a marked feature, while other clinical evidence of tabes is lacking. The mode of onset, and the presence or absence of joint deformity and of stiffness and limitation of movement, are criteria of doubtful value. Of greatest help are the x-ray appearances, and the mode of evolution. In tabetic arthropathy the characteristic radiological finding is condensing osteolysis with ill-defined limits, while the evolution of the disease is much more rapid than that of osteo-arthritis.

**Follow-up Treatment of Neurosyphilis.**

**SUBRAMANYAM, N. A. (1962). Indian J. Derm. Venereol., 28, 70. 8 figs, 23 refs.**

**Neurosyphilis. Clinical Experience in Diagnosis and Treatment.**

**HABIB, G. B. (1962). W. Indian med. J., 11, 100. 3 refs.**

**SYPHILIS (Serology)**

**Sero-negativity in Primary Syphilis.**

(Sulla carenza serologica nella sifilide primaria attuale.) **RANDAZZO, S. D. (1962). Minerva dermat. (Torino), 37, 139. 26 refs.**

The author, writing from the University of Catania, Sicily, describes 183 cases of primary syphilis in many of which sero-positivity developed later than the 25th day, or not at all. The age, sex, and occupation of the patients and the site of the primary lesions are summarized. Multiple primary lesions were present in two women and in 36 men, and in a further fifty cases the primary lesions were otherwise atypical. In all the cases the history, the clinical examination, and the dark-ground examination put the diagnosis of syphilis beyond doubt. In 67 (36 per cent.) of the cases serological tests were negative at the time of the appearance of the primary lesion, although regional lymphadenopathy was present and the dark-ground findings were positive. In 25 of these cases, the serological reactions were still negative on the 70th day and did not become positive until the first signs of the secondary stage appeared. Provocative and, later, curative specific treatment produced sero-positivity in a further sixteen cases within 180 days of the appearance of the chancre. Finally, nine cases remained sero-negative.
over 180 days, although specific treatment produced a Herxheimer reaction and other effects. In two of these nine cases the treponemal immobilization (T.P.I.) test was positive from the 30th day; in the remaining seven the T.P.I. test and the classical serological tests remained negative for over 180 days. The citochrome reaction was the first to become positive, followed by the Kahn and microgen reactions. The Wassermann reaction became positive, both with cardiolipin and beef heart antigens, 7 to 10 days after the citochrome reaction.

In the other 116 cases (64 per cent. of the series) the classical serological tests were positive in the primary stage; the T.P.I. test was positive in eight cases, doubtful in fourteen, and negative in 94.

The author discusses these findings in relation to published work. Factors which may play a part in persistent sero-negativity are the antibody-forming capacity of the patient, the antigenicity of the organisms, and the insensitivity of the available tests. In the nine cases which remained sero-negative for 180 days the serological reactions may have been affected by the treatment, which in their case was started on the 70th day. The frequency of prolonged sero-negativity must not be allowed to lead to a false sense of security in the patient or to become a danger to the public health.

F. Hillman

False Positive Reactions in Serological Tests for Syphilis.


In recent years there has been increasing interest in the specificity of serological tests for syphilis, and since the discovery of the treponemal immobilization test by Nelson and Mayer (1949) it has become possible to distinguish with considerable accuracy between specific and non-specific reactions. The diminishing incidence of syphilis in many countries has produced a relative increase in the number of cases with non-specific reactions and heightened the importance of accurate diagnosis in patients in whom serological tests give positive results. The fact that some of the subjects who have non-specific reactions eventually develop serious disease, usually in the form of systemic lupus erythematosus or other collagen disease, lays a new responsibility on the venereologist investigating patients with positive serological reactions. Knowledge in this field of medicine has advanced slowly but steadily and the literature is voluminous. A thorough review of the relevant literature of the last 50 years is therefore welcome. This paper from the Karl Marx University, Leipzig, covers the subject in great detail and gives a clear and accurate account of the work on which the present concept of the biological false positive reaction is based. There is an interesting discussion on the possible mechanism of the anomaly and on its causes. [The bibliography of 168 items is exhaustive and the paper is most useful for purposes of reference.]

R. D. Catterall


Antisera to the Nichols strain of T. pallidum, the cultivable Reiter treponeme, T. zuelzerae (a free-living treponeme isolated from mud), and T. microdentium were prepared in rabbits, the globulins separated and conjugated with fluorescein isothiocyanate. Conjugated antisera to T. pallidum, the Reiter treponeme, and T. zuelzerae gave fluorescent reactions with the homologous treponeme used to prepare them and with the other two organisms but not with T. microdentium. The antiserum to T. microdentium reacted with this and the other three species. When the four antisera were absorbed with the Reiter treponeme, reactivity with this organism was abolished and the sera were found to react only with the treponemes used to produce them. Similarly when the antiserum against the Reiter treponeme was absorbed with either T. pallidum or T. zuelzerae, reactivity with the Reiter treponeme remained while cross-reactivity with the other organisms was abolished. This suggests the sharing of a common group antigen between the treponemes studied.

A proportion of non-syphilitic sera are found to give positive reactions in the fluorescent treponemal antibody (F.T.A.) test when the serum is tested at dilutions of 1 : 5 or in rare cases, up to 1 : 100 instead of the usual test dilution of 1 : 200. It is suggested that this may represent the presence in such sera of antibody against mouth treponemes.

Four syphilitic sera were examined by the F.T.A. technique before and after absorption with Reiter treponemes. Fluorescence with the Reiter treponeme as antigen was abolished while the F.T.A. titre against T. pallidum was only reduced to a half or a quarter of its original value. Removal of non-specific reactivity from a serum, either by absorption with the Reiter treponeme or by the use of a blocking antiserum, may make it possible to increase the sensitivity of the F.T.A. test by enabling sera to be tested at a lower dilution than at present used. Monospecific antiserum from which the group antibody has been removed may be useful reagents for differentiating treponemes by the fluorescence technique.

A. E. Wilkinson


ABSTRACTS


Production of Immobilizing Antibodies to the Nichols Strain of Pathogenic Treponema pallidum (Sulla produzione di anticorpi immobilizzanti il Treponema pallidum patogeno di Nichols.) D'Alessandro, G., and Zaffiro, P. (1962). Riv. Ist. sieroter. ital., 37, 532. 9 figs.


SYPHILIS (Pathology)


This is a study, from the Alfred Fournier Institute, Paris, of the persistence of Treponema pallidum in fifty rabbits infected with the Nichols strain of that organism and treated with benzathine penicillin.

The treponemal immobilization (T.P.I.) test was negative in all the animals before inoculation. The progress of the disease was observed by repetition of this test and by examination of the lesions and lymph nodes by a special silver-staining technique (which is described). The rabbits were treated, 2 years after inoculation, with benzathine penicillin in a dosage corresponding approximately to 14 meg units in a man weighing 70 kg. Transplant of lymph nodes to 39 other rabbits was carried out 20 to 24 months after inoculation—that is, shortly before treatment—and to twenty other rabbits 32 to 36 months after inoculation—that is, 8 to 12 months after treatment. Of the 39 “pre-treatment receptors”, 29 developed syphilitic lesions in which Treponema pallidum was demonstrated; of the twenty “post-treatment receptors”, none developed syphilitic lesions but one gave a positive response to the T.P.I. test and Treponema pallidum was found in the tissues. Two years after treatment the result of the T.P.I. test was still positive in all the original animals. Of thirteen rabbits, one untreated and twelve treated, given cortisone 3 years after inoculation, one (which had received treatment) developed characteristic late syphilitic lesions containing Treponema pallidum.

It is concluded that if syphilis in the rabbit is allowed to develop for a long period, treatment will not destroy the treponemata, and that it is no doubt the persistence of treponemata which explains the presence of circulating immobilizins. On the other hand, the treponemata appear to have lost much of their virulence for new receptors. The authors have begun a study to ascertain whether Treponema pallidum can also be demonstrated in human beings who, in spite of much antisypilitic treatment, persistently give a positive response to the T.P.I. test.

Robert Lees


In continuance of their previous paper the authors now report studies of inguinal lymph nodes derived from two human cases of treated latent syphilis, one tabetic insufficiently treated, five tabetics treated over several years, and one case of taboparesis treated and studied for 19 years. The lymph-node material was studied by the silver-staining technique already described and also by animal inoculation. Most of the patients had received prolonged treatment with heavy metals and penicillin, and many years had elapsed since the original infection with syphilis. All the patients had persistently positive serological reactions for syphilis. Many of the stained slides showed the presence of typical Treponema pallidum; in other instances the organisms were of spiral form but not characteristic morphology. [There are eight photomicrographs illustrating these organisms.] Rabbits were inoculated with lymph-node material from four of the cases. There resulted very tiny lesions which took a long time to appear, and which contained typical T. pallidum. Sufficient time has not yet elapsed to report on the treponemal immobilization test of the inoculated rabbits. These results do not at present justify clinical or therapeutic conclusions, but indicate
the possibility of the survival of virulent T. pallidum in syphilis after a long time and after much treatment.

Robert Lees

GONORRHOEA


NON-GONOCOCCAL URETHRITIS AND ALLIED CONDITIONS

The authors recall that the disease generally known as Reiter's syndrome was described by Fiessinger and Leroy (1916), the same year in which it was reported by Reiter. They describe here the clinical features in 117 patients who had contracted the disease in Algeria and whom the authors saw at the Desgenettes Military Hospital, Lyons. The onset was always during the hot summer or autumn months and was associated with enteritis in 95 per cent. of cases. The intestinal infection was thought to be due to an enterovirus which has not yet been isolated. War conditions favoured the outbreak of epidemics of this disease. In the present series there were few severe cases and the immediate prognosis was good, but, the authors point out, because of the possibility of ankylosing spondylitis developing later the long-term prognosis should be guarded. There is no specific treatment, but adrenocorticophin was found to shorten the duration of the painful arthritic stage.

G. W. Csooka


A 22-year-old man had conjunctivitis, followed a few days later by arthritis and urethritis and after 1 month by keratosis blemorrhagica which spread to all regions of the skin. The patient was seriously ill for $\frac{1}{2}$ months in spite of treatment with a great number of drugs including antibiotics and high doses of steroids. After blood replacement he eventually recovered.

G. von Bahr


The authors give an extensive review of the literature, and a description of the condition based on sixteen cases with long-term observation, together with partial data on nineteen others.

The syndrome necessarily includes urethritis, arthritis, and conjunctivitis, and tends to be self-limiting after 2 to 6 months, although the joint manifestations may persist and the condition may recur. Together with the
major feature enumerated, skin lesions are common, are not distinguishable from keratosis blennorrhagica, and affect especially the palms, soles, and glans penis. Intestinal upsets are frequent, cardiovascular changes may be evident with the electrocardiogram, and the eye may have a keratitis or iritis.

There is nothing significant in the biochemical or haematological investigations. Culture of the synovial fluid of affected joints has many times grown a pleuropneumonia-like organism. This has not been identified as it has died out on sub-culture, and it is possible that it may be an L-form of some other organism, as most of the patients had had previous antibiotic treatment.

Treatment should be symptomatic, as there is no evidence that antibiotics or steroids are of any use.

J. H. Kelsey


The cutaneous, mucosal, and synovial lesions of the syndrome are similar in that there is a subacute inflammatory process with a tendency to be localized in the superficial vessels of the membranes, with intense hyperaemia and protein-rich exudate, neutrophil and lymphocyte infiltration, and some epithelial or synovial proliferation with cellular necrosis. The skin lesions are very like those of psoriasis, but have a predilection for the buccal and plantar regions. The mucosal lesions are the same as the skin lesions except for the epithelial differentiation, and the constant bathing in secretion which prevents accumulation of cells and exude. The joint lesions show much similarity to rheumatoid arthritis, but the small joints are not involved so extensively and the distribution is markedly asymmetrical.

J. H. Kelsey


The main features of the condition are reviewed. It is noted that the usual ocular complication of conjunctivitis may be mild and transient and so be missed. The clinical appearance of the condition suggests an infective cause, but the failure to isolate an infective agent together with the failure of antibiotics in treatment does not support this. There is also a similarity between this condition and rheumatoid arthritis.

J. H. Kelsey


Viruses of the psittacosis-lymphogranuloma group, including “Tric” viruses, contain a heat-stable complement-fixing antigen that is part lipopolysaccharide and part protein. It probably forms part of the cell wall of the intact virus. Its presence may be shown throughout the life cycle of the virus, and an increase in amount may be shown at least 6 hours before all the adsorbed virus increases in infectivity, the increase occurring after 16 hours and increasing linearly to 28 hours. The group antigen probably forms at a stage in the development cycle when large forms predominate, and is later distributed among the smaller elementary bodies.

J. H. Kelsey


Inoculation of a volunteer’s eye with virus of the 23rd egg passage isolated from the cervix of a woman whose baby developed inclusion ophthalmia neonatorum, resulted in a mild acute conjunctivitis with inclusion bodies. Inoculation of the same volunteer’s other eye with virus of the 2nd and 3rd egg passage isolated from the eyes of a baby with inclusion blennorrhoea resulted in a kerato-conjunctivitis indistinguishable from trachoma.

B. Jay

Trachoma and Inclusion Blennorrhoea. COLLIER, L. H. (1962). Sci. Basis med. ann. Rev., p. 345. 4 figs, 23 refs. [This paper gives a very clear account of the present state of knowledge on these conditions.] The aetiology, clinical features, and pathology of trachoma and inclusion blennorrhoea are described and the relationship between the two conditions discussed. Strain differences that exist between the viruses causing these conditions are described, as are serological studies on circulating antibodies. The field investigations of the M.R.C. Trachoma Research Unit in a Gambian village and vaccine studies undertaken at the Lister Institute are described.

B. Jay

Simple Method for Total Particle Counts of Trachoma and Inclusion Blennorrhoea Viruses. REEVE, R., and TAVERNE, J. (1962). Nature (Lond.), 195, 923. 8 refs. Estimates may be made of the number of elementary bodies in suspensions of yolk sacs infected with trachoma or inclusion blennorrhoea viruses. A known volume of the suspension is spread on a glass slide and stained with Giemsa. The number of particles per ml of suspension may be estimated from a particle count of the slide.

J. H. Kelsey


PUBLIC HEALTH AND SOCIAL ASPECTS


The recent increase in the prevalence of venereal
diseases in Britain is considered in the light of the Ministry of Health's statistics and the studies of the British Cooperative Clinical Group, but particularly from the returns of a London clinic (St. Mary's Hospital) situated in an area in which large numbers of West Indian and other immigrants reside.

"By far the greatest" cause of the increase in venereal diseases since 1955 is considered to be immigration. In 1960 at St. Mary's only 30 per cent. of male patients with gonorrhoea were born in the United Kingdom; 40 per cent. were West Indians, 10 per cent. of other coloured races, and 20 per cent. of other groups. The next most important cause of the increase in venereal diseases in London is considered to be the male homosexual, 70 per cent. of patients with early syphilis who attended St. Mary's Hospital in 1961 admitting to homosexual contact. [The figures for gonorrhoea are not given.] The third cause is said to be the increase of promiscuity among young persons. At St. Mary's Hospital 37 per cent. of cases of gonorrhoea in teenage males affected those born in the United Kingdom (a higher figure than the 30 per cent. of the total cases), from which it is concluded that, if the situation in the rest of the country were similar, then much of the increase of gonorrhoea in this group is accounted for by young immigrants. The opinion is expressed, on the reasoning that approximately one male teenager to two females was treated for gonorrhoea in the clinic in 1960—a greater proportion of females than the nearly four to one encountered for all ages in all clinics—"that the greater part of the increase of venereal disease among young people is due to their association with immigrants of all colours, and to the greater increase of venereal disease caused by the latter, making promiscuous youth more liable to infection". That drug resistance is a reason for the increase is considered to be a fallacy.

Methods recommended to check the increase include health education, limitation of immigration, proper housing provision for immigrants, and the repatriation of immigrants convicted for sexual crimes.

[The British Cooperative Clinical Group studies referred to have shown, if anything, a lower proportion of teenagers in the clinics, with the majority of West Indian male immigrants, than in the rest of the country.]

R. R. Willcox

Factors Leading to a Failure of Control of Gonorrhoea.


The author of this paper from St. Mary's Hospital, London, points out that the truth of the old epidemiological adage, that "effective treatment alone is not sufficient to control a disease" is borne out by the increasing failure to control gonorrhoea in spite of the introduction of successful treatment, first with sulphonamides and more recently with penicillin and other antibiotics. In 1960 more cases were under treatment than in 1925, indicating an over-all failure of control. The problem is not confined to Great Britain; according to the Bulletin of the World Health Organization (1961, 24, 357) it is a world-wide phenomenon.

Among the general factors responsible for failure are:

1. Ease of treatment which has led to lack of interest by both patient and doctor;

2. The widespread use of antibiotics for various conditions, which may cure before the disease is diagnosed, leaving the source of infection hidden, or it may relieve symptoms without cure, leaving an infectious patient.

Social factors include the exposure to infection of travellers, seamen, servicemen, and all groups away from their normal environment, including immigrants. Repeated infections, often in a small group, are common-place. West Indians accounted for 3 per cent. of male infection in 1952 but for 25-5 per cent. in 1960, and were responsible for over half the increase in males between 1952 and 1958. In young subjects of both sexes between 15 and 19 years of age there was a disproportionately large increase in the incidence of the disease compared with subjects aged 25 and over. That the reservoir of infection in females is unrecognized is shown by the fact that the number of reported cases in males is several times that in females. Legislation against prostitution has not had a great effect on control in the United Kingdom, where only 35 per cent. of infections in males are from prostitutes. Tracing the source by contact slip has also met with only limited success in Britain, less than 20 per cent. of patients being traced by this means.

Finally, the author states that difficulties in treatment resulting from drug resistance, accompanied by high defaulter rates, are additional factors in the failure of control.

A. J. Gill


