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.

SYPHILIS (Clinical)

In 1947 there were 298 cases of primary-secondary syphilis; this total fell rapidly to an average of between 34 and 50 cases between 1950 and 1953, only 25 in 1955, fifteen in 1956, nine in 1957, and twelve in 1958. But in March, 1959, there was a sudden reappearance of the disease, 116 cases in that year being followed up by 130 in 1960 and 142 in 1961.

The causes of this recrudescence of the disease are listed as the inexperience of younger doctors and their lack of suspicion of syphilis, the effect of antibiotics in masking early syphilis, alteration in the virulence of Treponema pallidum, and social and sociological changes. Recent legislation on prostitution is not blamed for the higher incidence.

R. Lees


The records of 274 syphilitics were studied and 78 were selected for analysis. The authors find latent syphilis in elderly patients is not uncommon; that syphilis appears to be occurring more frequently since 1958, though this may be due to more systematic testing; that lesions of the nervous system respond more satisfactorily to treatment than cardiovascular disease. It is exceptional to observe a return to negative of serological tests for syphilis. The side-effects of treatment were never serious. R. Lees


Systematic serological tests in over 15,000 cases revealed 2.38 per cent. syphils, though 34 per cent. of these syphilitic patients had been admitted to hospital for non-syphilitic disease. Interstitial keratitis was fairly common and responded well. Uveitis was also fairly frequent but had a less satisfactory outcome. Ocular palsies improved in about half the cases. Optic atrophy was disastrous. Many subsequent vascular and degenerative lesions were noted. R. Lees


SYPHILIS (Therapy)


At the Institut Alfred-Fournier, Paris, the authors inoculated 50 rabbits with the Nichols strain of Treponema pallidum. Two years later twenty of the 27 survivors were given a course of injections of penicillin. Serological tests carried out at intervals of 6 months showed that the titre of immobilizing antibody remained high during the 2-year period before treatment was given, but fell progressively after treatment, although the antibody never disappeared completely from the serum. Poppite lymph nodes removed 8 to 12 months after treatment were shown by special staining techniques to contain T. pallidum in all cases. However, insertion of these lymph nodes into the scrotal sac of healthy rabbits resulted in infection in only one case, in which a positive treponemal immobilization reaction was obtained 5 months after the operation. In contrast, implantation into healthy rabbits of lymph nodes removed from the seven untreated rabbits 2 years after infection resulted in the development of a syphilocoma in six cases and latent syphilis in one, although similar transfers carried out 5 to 12 months later caused only minimal lesions in two out of six cases.

Cortisone was administered by injection to twelve rabbits one year after penicillin therapy. In two instances typical late lesions of syphilis, from which T. pallidum was isolated, appeared on the internal surface of the ears and in five cases treponemes were demonstrated in the nasal mucosa. Supplementary experiments were carried out to ensure that the strain of T. pallidum used was not resistant to penicillin and that the dosage of penicillin given was adequate.

Further investigations were carried out on ten human patients with late syphilis, most of whom were suffering from long-standing tubers dorsalis. All but one had received repeated courses of treatment with penicillin, arsenic, and bismuth for periods varying from 1 to 16 years. In all the treponemal immobilization reaction was positive. Examination by special staining techniques of lymph nodes removed at operation revealed T. pallidum in all cases, but the results of inoculation into animals suggested that the treponemes had either partially or completely lost their virulence.

The authors concluded that treatment given in cases of late syphilis, whatever its type, intensity, and duration, is incapable of destroying all the treponemes in the body if they have been present in the lesions for a long period. The persistence of treponemes in the tissues determines the continued presence of immobilizing antibody in the serum. Treponemes which persist after treatment preserve their viability and can, in some cases, be transmitted to experimental animals. However, perhaps because of the duration of the infection, it appears that these organisms have lost their virulence, completely or partially, and live in the tissues as commensals. On the other hand, under
certain [unspecified] conditions, they might become virulent and pathogenic again, at least to the host who is harbouring them. In this way syphilitic disease should be regarded as behaving in a manner similar to that of other very chronic infectious diseases.

(This paper reports some of the most important, original, and stimulating research work carried out in the field of the treponemal diseases for many years. If the authors' findings can be confirmed at other centres this will represent a very great advance in our understanding of the behaviour of *T. pallidum* in human and experimental syphilis.)

R. D. Catterall


Previous experiments at the Institut Alfred-Fournier, Paris, showed that treponemes still could be found in the lymph nodes of rabbits with late syphilis after treatment with 200,000 units/kg. penicillin (*Ann. Inst. Pasteur*, 1962, 102, 596, 693). The present study was designed to examine the effect of high blood levels of penicillin produced by large doses given over a short period.

Twenty rabbits were inoculated subcutaneously with material from popliteal nodes from rabbits infected by intratesticular inoculation with the Nichols strain of *T. pallidum* 2 years previously. Dark-ground positive lesions appeared in eighteen animals after 30 to 144 days; two animals showed no lesions, but TPI tests on their sera became positive.

Thirteen of the twenty animals were treated 647–655 days after infection with three dosage schedules of penicillin-G and benzathine penicillin-G:

(a) Five rabbits received 27,200,000 units over 12 days (9,000,000 units/kg); three of these died during treatment.

(b) Four were given 18,200,000 units over 7 days (6,000,000 units/kg); one died on the 17th day.

(c) Four received 7,200,000 units over 6 days (2,400,000 units/kg); three died after 20 to 30 days.

The three courses produced blood levels of 2-5, 4-95, and 6-5 units/ml. 3 days, 15 hrs, and 15 hrs after the last injection.

Examination of smears of lymph nodes by a silver-staining technique showed typical *T. pallidum* in four and atypical forms in three of the untreated animals. Five of the treated animals were similarly examined 6 to 9 months after treatment and two further animals after death on the 17th and 68th day; typical *T. pallidum* were seen in six and atypical forms in one.

TPI tests on the untreated animals showed a decline in titre, median values being 1,500, 800, and 450 after 15, 27, and 31 months. The five animals surviving treatment showed a more pronounced drop, the median titres before treatment being 1,000, falling to 400 and 200, 3 and 8 months after treatment had been given.

The authors conclude that, when treatment is given when infection has been present for 2 years, even massive doses of penicillin (corresponding to 168–630 mega units in man) producing high blood levels do not effect “bacteriological sterilization” of syphilis in the rabbit. A host-parasite equilibrium seems to be established and the persistence of treponemes is presumably responsible for the continued production of immobilizing antibody.

A. E. Wilkinson


“Malignant syphilis” apparently resistant to penicillin responded to treatment with bismuth. The patient suffered from severe secondary syphilis but had not improved after 15 mega units penicillin in 20 days, accompanied by cortisone. Histology showed the persistence of inflammation, though the clinical appearance suggested atrophy.

R. Lees


126 observations were made of visceral or serological syphilis, representing 1-7 per cent. of the total patients of the unit. Fully 1 per cent. of the patients was properly treated and supervised for syphilis. There is need for a more definite policy on the indication for treatment and assessment of results.

R. Lees


Five cases were treated by resection and replacement by a prosthesis.

 Palliative measures, such as ligature, “wrapping”, and “wiring”, are of little value. There are major technical problems in the operative treatment and the therapeutic indications are reviewed according to the site of the aneurysm and the age and condition of the patient.

R. Lees


In this series of 115 cases, anti-syphilitic treatment had
been given to 92, penicillin being given to 77 in amounts of 10–15 million units. In a few cases mercury was given before penicillin, and in a few cortisone was given during the first or first and second weeks. Bismuth was used in only five instances. In six patients the treatment may have caused serious aggravation of the disease, some proving rapidly fatal. A favourable effect of treatment was noted in 23 cases. In many of the seriously ill patients it is difficult to form an opinion of the effect of specific treatment but on the whole the authors were disappointed.

R. Lees


SYPHILIS (Serology)


ABSTRACTS


SYphilis (Pathology)


GONorrhoea


In the study herein reported from Baylor University College of Medicine, Houston, Texas, the sensitivity of the delayed fluorescent antibody test for gonorrhea was compared with that of the standard gonococcal culture technique in specimens from 477 male patients. There was agreement between the results of the two tests in 441 (92.4 per cent.) instances. This suggests that the delayed fluorescent antibody test for gonorrhea is at least equal in sensitivity to a carefully performed culture technique. Males were selected for the investigation because "diagnosis both clinically and culturally is more reliable in men", but the authors consider that the delayed fluorescent antibody procedure will probably find its greatest application in the diagnosis of asymptomatic gonorrhea in females. Leslie Watt


NON-GONOCOCCAL URETHRITIS AND ALLIED CONDITIONS


The virologists are having fun. We all know that the rumour is abroad that inclusion conjunctivitis and trachoma are either one and the same thing or, alternatively, so incestuously related as to be indistinguishable, and that certain ophthalmologists are dividing their time between the conjunctiva, the vagina, and the male urethra. The new name for the TRachoma-Inclusion-Conjunctivitis virus is the TRICVirus, and in order to differentiate and clarify the large number of strains now being retrieved from all over the world, a meeting at the New York Academy of Sciences has recommended that, from January 1, 1963, the following system should be introduced for designating any particular virus in the interests of uniformity and ease of communication:

TRIC/antigenic group (if known)/country of origin designated by the international automobile plate letters/laboratory where grown and sequential number given by the World Health Organization/source of the virus (O for ocular, G for genital) followed by the diagnosis (T for trachoma, C for adult inclusion conjunctivis, N for ophthalmia neonatorum). Thus the initial strain isolated by the Medical Research Council team in the Gambia, would be designated: TRIC/ WAG/MRC-1/OT.

The blank will be filled up when the virologists make up their minds how to use fluorescein-antibodies in determining the antigenic group; and we all know that if you have a motor in Gambia the registration is WAG— not an abbreviation for station WAGon but indicating "West Africa Gambia". It is quite obvious that none of these interesting viruses will become lost, stolen, or strayed. Stewart Duke-Elder


PUBLIC HEALTH AND SOCIAL ASPECTS


CHEMOTHERAPY


MISCELLANEOUS


During a recent 4-year period sixteen patients with an unusual ulceration of the glans penis were seen at the Royal Buckinghamshire Hospital, Aylesbury. The youngest patient was 17 years of age and the oldest 82. There was a pre-existing balanitis, seldom severe, in eleven, which, however, had been present only a few weeks in four. The necrotic lesions started as small red papules, often of pin-head size, though occasionally larger. They were purpuric or haemorrhagic in character, enlarged rapidly, and developed a central yellow slough surrounded by an erythematous ring. The general health of the patients remained good and there was neither fever nor lymphadenopathy.

The condition lasted 6 weeks to 5 months. No relapses occurred in ten out of eleven patients followed up for more than 2 years. There were no consistent bacteriological findings. The author considers that the lesions were infective in origin and that the causative organisms induced an intense vascular reaction leading to a local infection. The nature of the infection, however, has yet to be determined. The condition did not respond to penicillin or other antibiotics. E. W. Prosser Thomas


The morphology of Shepard's "T-strain" organisms from the human genital tract was investigated. The incubation of "T-strains" in 20 per cent., CO2 with 80 per cent. nitrogen for 4 to 5 days caused surface outgrowth from the central core of the colonies embedded in the agar. Filtration through HA, PH, and VC Millipore filters showed that the elementary particles of "T-strains" were between 0.3 and 0.1μ in diameter. "T-strain" pleuropneumonia-like organisms (PPLO) from broth cultures, stained by Giemsa's method, were seen to be minute, spherical particles, similar in size to the particles of the large-colony strains. Colonies of "T-strains", when prepared by the microculture, fixed-agar-block, and Formvar methods, resembled those of large-colony PPLO. It was concluded that "T-strain" organisms were true PPLO. (Authors' Summary)


