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, Biological False Positive Phenomenon, Pathology, Experimental).
Gonorrhoea.
Non-Gonococcal Urethritis and Allied Conditions.
Reiter’s Disease and Allied Conditions.
Antibiotics and 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)


Neurological complications of tabetic arthropathies of the lumbar spine are manifest by radicular compression causing a variety of symptoms from sciatica to foot-drop.

As demonstrated by contrast radiography, the main offender appears to be the protrusion of the intervertebral discs.

Laminectomy performed in three patients was found to relieve them of all neurological symptoms.

[Authors’ summary]


SYPHILIS (Serology)


The authors have shown that, although all but seven of 33 guinea-pigs infected with Borrelia hispanica developed positive Kahn and Kline tests when examined 23 to 266 days after inoculation, none of the animals developed immobilizing antibody against Treponema pallidum.

The intradermal injection of killed suspensions of B. hispanica and the Nichols strain of T. pallidum into 46 patients with syphilis at various stages, 32 control patients without syphilis, 39 rabbits infected with T. pallidum, and fifteen healthy rabbits produced a similar incidence of delayed hypersensitivity reactions to the two antigens. These were maximal in the patients with late acquired or late congenital syphilis; no positive reactions occurred in the healthy humans or rabbits.

Quantitative indirect fluorescence tests in which T. pallidum and B. hispanica were used as antigens were carried out on 62 sera from patients with syphilis. Positive results were obtained with both antigens, the titre against T. pallidum being on average twice that against B. hispanica. Work by Alline and Marx (Ann. Inst. Pasteur, 1966, 111, 28) is quoted as showing that absorption of sera with Reiter treponemes abolished reactivity with B. hispanica but only lowered the titre against T. pallidum. The results suggest that the common group antigen shared by various species of treponemes is also present in Borrelia species.

A. E. Wilkinson

[Reprinted from the Bulletin of Hygiene, by permission of the Editor.]


Over a period of 5 years, 2,565 routine serological
Agglutination of Spirochaetes in the Serum by the Technique of Roemer and Schlipkoeter. Contribution to the Sero-diagnosis of Syphilis. (La'agglutinazione delle sierochete nel siero secondo Roemer e Schlipkoeter (Z. Hyg. Infekt.-Kr., 1955, 140, 528) (RS test) was compared with the VDRL test as a screening procedure for syphilis on 10,000 specimens of serum or CSF, positive results being checked by the fluorescent treponemal antibody (FTA) test. The antigen for the RS test, a formalized suspension of Reiter treponemes, was obtained commercially. Sera were diluted 1 in 40 in phosphate buffered saline (pH 7-0) containing 3 per cent. sodium chloride and inactivated at 62° C. for 30 minutes, after which 0-04 ml of antigen was added to 0-2 ml of the diluted serum (or to a similar amount of untreated CSF). The mixture was incubated at 37° C. for 2 hours and left at room temperature for 30 minutes before the result was read. When the reaction was positive the mixture was re-examined after being heated at 65° C. for 30 minutes; this re-heating is said to eliminate nonspecific agglutination.

Of the 10,000 specimens examined 119 were positive by both RS and VDRL tests, eleven by the RS test only, and thirteen by the VDRL test only. Of these 143 specimens a positive FTA reaction was given by 72, of which one was RS-negative and two VDRL-negative; the three patients concerned had been treated for syphilis in the past. [No information is given about the 71 cases in which positive findings with the RS and/or VDRL test were not confirmed by the FTA test.] It is concluded that the high sensitivity of the RS agglutination test makes it a valuable adjunct to the VDRL test as a screening procedure. A. E. Wilkinson


Syphilis and the Clinical Laboratory. (Sifilis y laboratorio clinico.) GAYA NOYA, E. (1967). Laboratorio (Granada), 44, 401.

SYPHILIS (Pathology)


SYPHILIS (Experimental)


Suspensions of Treponema pallidum (Nichols strain) containing 2-4 to 2.5 x 10⁹ organisms/ml were subjected to y-irradiation at a dosage of 520,200 r, and 37 rabbits with negative VDRL and TPI tests were injected intravenously with 1 ml of the irradiated suspension at weekly or twice weekly intervals. The non-infectivity of the suspension was determined by clinical and darkground examination of testicular fluid and transfer of a testis and popliteal node from twenty of the animals, five of which had to be killed.

After 12 weeks, fifteen of the animals were challenged by the intradermal inoculation of 500 virulent T. pallidum at each of four sites, together with ten normal rabbits as controls. None of these fifteen rabbits showed evidence of protection against the challenge inoculum, lesions developing at the same time (15 to 17 days) as in the control animals.

The remaining seventeen animals received a total of 24 weeks' immunizing injections and were challenged as before, together with ten control animals. Specimens of blood taken before and 4 and 19 days after the challenge inoculum were examined by the VDRL and TPI tests. The rabbits which had received 24 weeks' immunization showed some evidence of resistance, the mean period before lesions developed being 18-8 days compared with 14 days in the control group. When
lesions had developed at all the sites in the control group (17 days), only 48 per cent. of the sites on the immunized animals showed lesions. Thirteen of the fifteen rabbits injected for 12 weeks showed fairly high pre-challenge TPI titres (208—7,680), as did seven of the partially-immune rabbits injected for 24 weeks (84—4,234). There was no correlation between the TPI titre and the immune status of the animals and no anamnestic response to the challenge inoculum was detected.

A. E. Wilkinson
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GONORRHOEA


0·5 ml. of urethral discharge was collected from a man with acute gonorrhoea, diluted in 2 ml. peptone water with added ascitic fluid and incubated at 37° C. for 3 hours. The suspended pus was used to inoculate two male monkeys (Lemur fulvus).

The first animal received 0·5 ml. of the suspension into the urethra but no infection resulted. The second animal was inoculated with 2·0 ml. suspension into the epididymis and probably into the testis as well. After 3 days a profuse urethral discharge was produced which contained polymorphs and Neisseria. It is not stated whether these were fully identified as gonococci. The acute discharge lasted 20 days and then became mucopurulent. The testis became enlarged and tender. After 3 months the discharge had almost dried up but intracellular diplococci were still present, together with staphylococci and enterococci.

A. E. Wilkinson
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Tests for the presence of cytochrome oxidase were made on urethral discharge from 58 patients with acute or subacute anterior urethritis. A loopful of discharge was placed on slips of paper impregnated with dimethyl-p-phenylenediamine and α-naphthol; these were obtained commercially. In the presence of the enzyme, the colour of the paper changed from greyish-red to deep blue, usually after 3 to 5 minutes. The test was found positive on secretions from 24 patients with gonococcal urethritis and negative in 34 patients with non-gonococcal urethritis; 21 of these were diagnosed as abacterial, eleven as bacterial, one associated with Trichomonas vaginalis, and one with an organism of the Mima group which resembled the gonococcus in a Gram-stained smear but not on culture. It is suggested that the test may be of help in the rapid differentiation of gonorrhoea from infections associated with Mima.

[But one of these, M. polymorpha, var. oxydans, does produce the enzyme, so that full cultural identification is still necessary.] A. E. Wilkinson
[Reprinted from the Bulletin of Hygiene, by permission of the Editor.]


A series of 1,500 newborn babies was divided into three groups of 500 and one group was given Furacin in ophthalmic solution. The results lead the author to recommend the use of Furacin, especially in babies discharged early from hospital.

M. H. T. Yuille


Two cases of permanent ocular damage due to accidental application of ammoniacal silver nitrate (25 to 35 per cent.) in the newborn period are reported.

J. L. Baum


The patient, a 30-year-old man, stated he had been treated for gonorrhoea 3 months before the eye affection; 20 days before pain had started in the knees and ankles, and 2 weeks before the left eye was slightly red. This was followed by sudden loss of vision in the left and then the right eye. A smear of urethral discharge did not show any gonococci but "a smear taken by prostatic massage showed gonococci" [no mention of cultural confirmation is made]. Gradual improvement followed treatment with sulphonamides, antibiotics, corticosteroids, vitamins, and vasodilators. The author suggested that the eye condition was a toxic effect of a chronic gonococcal infection.

P. Rodin

Diagnosis and Treatment of Gonococcal Urethritis in Males. (Diagnostico bacteriologico antibiogramma y tratamiento de las uretritis gonococicas en el varón.) OLIVA, J. B., and RODRIGUEZ, J. A. G. (1967). Med. trop. (Madr.), 43, 143. 4 figs, 15 refs.


NON-GONOCOCCAL URETHRITIS AND ALLIED CONDITIONS


Cervical specimens were taken from 177 pregnant women examined in the first trimester at the University Hospital, Seattle. 82 per cent. were Caucasian, 14 per cent. were Negro; 78 per cent. were married. Six gave a history of gonorrhoea. Specimens for TRIC agent isolation were kept frozen for days or weeks before they were inoculated into yolk sacs of eggs. At least two passages were made on each specimen. TRIC agent was isolated from two patients, in each case after the second passage. When inoculated into eyes of monkeys both strains caused typical follicular conjunctivitis. One patient was an unmarried Negro girl and attempts to re-isolate the agent 2 months before and 6 weeks after delivery failed; the newborn infant did not develop conjunctivitis and specimens 3 days and 18 days after birth did not yield any isolate. The second patient was a married white woman who gave a history of gonorrhoea. She had not yet been delivered when last seen.

Specimens for mycoplasma were refrigerated then inoculated on PPLO agar on the same day. Mycoplasmata were isolated in 18 per cent. of the 177 women, but no T-strains were found. They were found over twice as often among Negroes. Transmission of mycoplasma occurred in two of five infants born to women who were harbouring mycoplasma. In one infant it was isolated from the eyes and in the other from the vagina. No illness was observed in either case. No mycoplasmata were isolated from six babies whose mothers were negative for the organism. P. Rodin


TRIC agent was isolated in yolk sac cultures in six out of 42 cervical specimens from women attending a Venereal Disease Clinic in Seattle. Two of the isolates were from patients who gave a history of eye disease (dendritic ulcer and iritis in one and “pink eye” in the other), but their eyes were healthy at the time of examination. Of fourteen patients with gonorrhoea, four had TRIC agent compared with two of the 28 without gonorrhoea. TRIC agent was found in four of fifteen patients with trichomonal infection and two of 27 without trichomoniasis. The isolation rate was the same in those with and without positive cultures for mycoplasma. Two of the patients positive for TRIC agent were pregnant and specimens were taken from the newborn infant of one of these at 2 days and 3 weeks after birth. Silver nitrate prophylaxis had been given at birth. TRIC agent was not isolated from any of the specimens. No isolates were obtained from eighteen specimens obtained from men with urethral discharge (mostly non-specific) including one patient with Reiter’s disease. No inclusion bodies could be found in smears from any of the 42 female or eighteen male patients.

Mycoplasmata were isolated from cervical specimens from 66 (48 per cent.) of 138 women and from urethral specimens from five (17 per cent.) of 29 men with gonorrhoea, and five (15 per cent.) of 33 men with non-specific urethritis. 92 of the women were Caucasian, 42 were pregnant, and 37 had gonorrhoea. T-strain colonies were not isolated. The rate of mycoplasma isolation was particularly high among women with trichomoniasis and lowest in those in whom neither trichomoniasis nor gonorrhoea were found. They were found about twice as often among Negro patients.

Comparative studies suggested that both TRIC agent and mycoplasma were more frequently found in the genital tracts of persons in a sexually promiscuous population. There was no evidence in this study of any association of mycoplasma with disease and although it must be assumed that TRIC agents are potential pathogens for the genital tract, the possibility should be considered that they could be commensal organisms.

P. Rodin


Chick embryos were inoculated with measured doses of various strains of the agents of trachoma and inclusion blennorrhoea and the number of infective organisms they contained was determined at intervals during the first 4 days after inoculation. The lag phase before the exponential phase of growth began was shorter for fast-killing and more virulent, variant strains than for slow-killing strains, and the difference was statistically significant. The variant strains multiplied faster during the exponential phase of growth and produced their highest titres sooner.

H. W. Symonds (Int. Abs. Biol. Sci.)


REITER’S DISEASE AND ALLIED CONDITIONS


A study of endocarditis as a complication of Reiter’s disease, with reference to the ocular signs. S. Vallon
ABSTRACTS

ANTIBIOTICS AND CHEMOTHERAPY


Joint fluid penicillin levels were measured in two patients with gonococcal arthritis and one patient with staphylococcal septic arthritis who were receiving 10 to 20 million units of penicillin per day intravenously. Levels ranged from 1.6 to 25 μg/ml (2.6 to 40 units per ml.) and were one-eighth to one-half of those observed in specimens of serum obtained simultaneously. Review of the literature confirmed that penicillin, methicillin, vancomycin, kanamycin, streptomycin, chloramphenicol, erythromycin, novobiocin, and tetracycline do enter the synovial fluid and, when given in sufficient dosage, result in adequate joint fluid levels.


PUBLIC HEALTH AND SOCIAL ASPECTS


In this report from the Royal Hospital, Sheffield, the author discusses twelve (3 per cent.) of 336 males with gonorrhoea seen during the year April 1, 1966, to March 31, 1967. These men had had a urethral discharge for 2 to 10 weeks before seeking treatment, the average duration of symptoms being 4 to 7 weeks. Their average age was 24 years. Eleven of the twelve were born in the United Kingdom.

The history of six patients is detailed and the reason given by all twelve for delay in seeking treatment is noted. Ignorance was the prime cause.

Comparing the study year with findings 5 and 10 years previously, the author concludes that the growing number of men ignoring symptoms threatens the element of control provided by early diagnosis and treatment. He discusses the relevance of his findings at this time when the boys born in the “bulge” birth-rate years after the war are now entering the age range 20 to 24 years—the years when the incidence of gonorrhoea in males is highest.

He concludes that, if the trend is to be dealt with, education about venereal diseases must view this group as a specific target.

R. S. Morton

Attitudes of Prospective School Teachers on Teaching Venereal Disease Information. NESER, W. B., and WIECHMANN, G. H. (1967). Publ. Hlth Rep. (Wash.), 82, 917. 6 refs.


Environmental Indicators and Implications for Control of Infectious Syphilis. NESER, W. B. (1967). Missouri Med., 64, 822. 10 refs.


MISCELLANEOUS


This is an excellently presented review. The commonest neurologic symptoms were found to be headache, increased tendon reflexes, dysarthria, urinary incontinence, monoplegia or hemiplegia, cranial nerve palsies, and psychiatric disturbances, in many cases taking the form of a frank organic dementia. The typical neuropathological findings are multiple small foci of softening
in relation to small blood vessels and with a predilection for the brain stem. The authors point out that these features are similar in many ways to those found in cases of polyarteritis nodosa and suggest the participation of an allergic mechanism as a causative factor.

R. B. Harcourt


A pathological study in two cases of Behçet's disease: meningo-encephalitic lesions seem to develop around the small veins; necrosis follows the haemodynamic changes due to phlebitis.

S. Vallon


The report of a case of Behçet's disease in which there was an aneurysm of the aorta, various episodes of venous thrombosis, buccal and genital ulceration, and uveitis.

It is suggested that Behçet's disease should always be considered in the diagnosis when aortic aneurysm occurs in young persons.

A. G. Cross


Abstracts

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