
**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)


An account is given of the historical background of the recognition of these two syndromes, together with notes on more recent publications. The comparable signs and symptoms are tabulated and the differential diagnosis of the two syndromes is indicated. The problem is illustrated by a single case history. 

D. F. Cole


The authors discuss the present importance of syphilis in ophthalmology, and conclude that it has been regressing since 1950.

S. Vallon


**SYPHILIS** (Therapy)


This paper from the Academy of Medicine at Magdeburg discusses the important problem of maternal early syphilis and the results of treatment with penicillin alone on both the mother and the child. A comprehensive review of the [German] literature on the subject is followed by a report of twenty cases, in five of which early syphilis was first diagnosed during pregnancy, while in fifteen pregnancy occurred after the completion of anti-syphilitic treatment. Treatment consisted of 9 mega units of penicillin given in daily injections of 600,000 units for 15 consecutive days. In three cases an additional course was given as pre- or postnatal prophylactic therapy.

There was no exacerbation of the clinical or serological findings as a result of the pregnancy in any of the cases. All the women gave birth to healthy children in whom no signs of congenital syphilis were detected during a 3-year follow-up period, despite the fact that some of the women remained sero-positive. In two patients who were treated for early syphilis during pregnancy a Jarisch-Herxheimer reaction occurred, but produced no complications in the mother or the infant.

The author concludes that rapid treatment with penicillin alone is adequate in cases of early syphilis occurring in pregnant women and is of the opinion that his own results and experience are similar to those reported from other centres.

R. D. Catterall

SYPHILIS (Serology)


In the modification of the fluorescent treponemal antibody (FTA) test described by Deacon and others (Proc. Soc. exp. Biol. (N.Y.), 1960, 103, 827; Abstr. Wild Med., 1960, 28, 365) and designated the FTA-200 test the sera are tested at a dilution of 1:200 because many normal sera are reactive at lower dilutions. This reactivity is thought to be due to the presence in such sera of antibody to saprophytic spirochaetes which share common or group antigens with Treponema pallidum. A procedure to remove these group antibodies has been developed at, and is described in this paper from, the Venereal Disease Research Laboratory of the US Public Health Service, Atlanta, Georgia. This procedure enables sera to be tested at a lower dilution and enhances the sensitivity of the test, which in its improved form is designated the FTA absorption (FTA-ABS) test.

The absorbing agent is prepared by the ultrasonic disintegration of Reiter treponemes from a 4-day-old culture. Insoluble material is removed by centrifugation and the sonicate titrated with a normal serum which shows strong fluorescence at a dilution of 1:5 to determine the dilution to be used for absorption. Then 0.05 ml of inactivated serum is added to 0.2 ml of the absorbing agent at the determined titre and a similar dilution is made in saline for comparison. The test conditions are the same as those for the FTA-200 method except that a rotating machine is not used. The controls set up with each batch of tests include a known non-syphilitic serum showing strong fluorescence when tested at a dilution of 1:5 without absorption and a low-titre syphilitic serum.

The FTA-ABS test was performed on 270 sera of known provenance in parallel with the treponemal immobilization (TPI) test, the FTA-200 test, and the original FTA test (on unabsorbed sera at a dilution of 1:5). The sera included 76 cases from untreated dark-field positive primary syphilis, 46 from cases of untreated late or inadequately treated syphilis, 38 giving biological false positive (BFP) reactions, and 100 from healthy controls. The percentage reactivities given by the various tests are shown in the following table:

<table>
<thead>
<tr>
<th>Test</th>
<th>Primary Syphilis</th>
<th>Other Syphilis</th>
<th>B.F.P.</th>
<th>Normal</th>
</tr>
</thead>
<tbody>
<tr>
<td>FTA-200</td>
<td>36-8</td>
<td>19-5</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>FTA-5 (saline)</td>
<td>100</td>
<td>100</td>
<td>31-6</td>
<td>24-5</td>
</tr>
<tr>
<td>FTA-ABS</td>
<td>80-7</td>
<td>100</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>TPI</td>
<td>36-8</td>
<td>91-2</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>

The authors conclude that the absorption procedure makes possible a considerable increase in the sensitivity of the FTA test without lessening its specificity and suggest that even minimal (1+) degrees of fluorescence should be considered significant when it is employed.

A. E. Wilkinson


The rapid plasma reagin (RPR) (circle) card test for syphilis and other treponematoses (Portnoy, Amer. J. clin. Path., 1963, 40, 473; Abstr. Wild Med., 1964, 35, 208) is performed on disposable plastic-covered cards with unheated serum and a modified VDRL slide test antigen containing charcoal, the results being read macroscopically after rotation of the card at 100 r.p.m. for 8 minutes on a mechanical rotator. In this report from the US Public Health Service Venereal Disease Research Laboratory, Atlanta, Georgia, the results given by the new test are compared with those of the standard VDRL slide test. The sera on which the comparison was made came from:

1. 260 normal blood donors with no history or evidence of syphilis;
2. 53 patients whose serum had given non-specific reactions in non-treponemal tests and negative reactions in the treponemal immobilization test;
3. 471 syphilitic patients representing all stages of the disease.

Both tests gave negative results with all Group 1 sera. In Group 2 the card test gave 45 positive results and the VDRL test 48. In Group 3 the RPR test gave 88-1 per cent. and the VDRL test 86-4 per cent. positive results. The two tests had a similar reactivity in primary and secondary syphilis, but the card test was more sensitive with sera from latent, late, and congenital cases. Five out of 217 sera from cases of secondary syphilis gave zone reactions with the card test; these false negative reactions could be eliminated by spreading the serum over the whole circular area on the card before adding the antigen, when frankly positive results were obtained in all five cases. The VDRL test was reactive with all the 217 sera in this group. Quantitative tests were performed on 377 sera by the two methods. The two titres were in complete agreement or differed by no more than one dilution in 75-9 per cent. of cases. The card test gave readings two or more dilutions higher than the VDRL test in 22-8 per cent. while the reverse was found in 1-3 per cent.

Aliquots of 100 sera were distributed to 14 laboratories for qualitative testing by the RPR technique, some sera being tested in duplicate. Agreement with the control laboratory ranged from 81 to 96-3 per cent. and reproducibility with the duplicate specimens from 99-3 to 100 per cent. Six laboratories carried out quantitative tests, but were not considered to have attained a satisfactory level of performance when their results were compared with those of the control laboratory. A. E. Wilkinson

Pairs of rabbits inoculated respectively with 10⁴, 10⁵, and 10⁶ Treponema pallidum were tested serologically during a period of 128 days for antcardioiodilipin, anti-Reiter protein, fluorescent treponemal, and treponemal immobilizing antibodies. The rapidity as well as order of appearance of the antibodies was found to be a function of size of inoculum. Chemotherapy resulted in decreases in the titres of antcardioiodilipin and anti-Reiter protein more rapidly than those of fluorescent or treponemal immobilizing antibodies. [Authors' summary]


The TPI (Treponema pallidum immobilization) test is often thought of as a means of discounting false positive Wassermann reactions; but it can also be of value in the opposite sense, i.e., to establish a diagnosis of syphilis when there is a false negative reaction. This is particularly likely to be useful in neuro-ophthalmology.

Redmond Smith


Clinical Notes on Six Cases of Serological Syphilis with Non-apparent or Atypical Clinical Symptoms. (Note clinique sur six cas de syphilis sérologique à symptômes cliniques inapparents ou atypiques.) JUON, M. (1964). *Dermatologica (Basel)*, 129, 140. 6 refs.


SYPHILIS (Pathology)


ABSTRACTS

GONORRHOEA
A Case of Blennorrhagic Iridocyclitis in a Schizophrenic. (Un cas d’iridocyclite blennorrhagique chez un schizophrénique.) ZLATAR, P. (1964). *Ophthalmologica* (Basel), 147, 303. 10 refs.

A case is presented of this, nowadays, rare condition. Diagnosis was confirmed by Amsler’s puncture of the anterior chamber. The treatment takes a long time and recurrences are possible.

J. L. Reis


NON-GONOCOCCAL URETHRITIS AND ALLIED CONDITIONS
Virus Culture Studies in Non-gonococcal Urethritis.

The urethral discharge and urethral scrapings from 45 men with non-gonococcal urethritis were investigated for virus content at the Special Treatment Clinic and Public Health Laboratory, Sheffield. Specimens were inoculated into human amnion and monkey kidney cell cultures and also into the yolk sac of fertile eggs. The urethral material was collected in antibiotic-containing medium and the inoculations were carried out without delay; the cultures were incubated at 30°, 33° and 37°C.

No cytopathic effect was found in the cell cultures and no elementary bodies were seen in Giemsa-stained sections of yolk sacs. In addition, haemagglutination and haemadsorption tests were carried out on the tissue culture fluid and cells with entirely negative results. These findings suggest to the authors that the urethritis may be only a manifestation of infection elsewhere in the body and that the presumed virus should be sought, for example, in the faeces or cerebrospinal fluid.

G. W. Csonka


Different strains of trachoma and inclusion blennorrhoea viruses were titrated in chick embryo yolk sacs and the average day of death plotted against dose of virus inoculated. Sigmoid curves were obtained. Although all strains tested had the same growth rate a given dose of some killed embryos more quickly than others. Strains killing most rapidly had fewest elementary bodies per LD 50, and were the only strains to form inclusion HeLa cells. During passage in the chick embryo three strains changed their behaviour, killing embryos faster and acquiring the ability to form inclusion HeLa cells.

P. G. Watson

Behaviour in Eggs and Tissue Culture of the Inclusion Blennorrhoea (LB4) Strain of the Trachoma-Inclusion Conjunctivitis Virus Group.
LARIN, N. M., and TREHARNE, J. D. (1964). *Nature* (Lond.), 204, 166. 1 fig., 8 refs.

It is shown that there is a relationship between the ability of the viral strain to form inclusions in tissue culture cells and its virulence for the chick embryo.

M. A. Bedford

Reiter’s Syndrome and Aortic Insufficiency.

Two cases are reported. It is tentatively suggested that there may be a link between ankylosing spondylitis and Reiter’s syndrome.

M. A. Bedford

A classical description of the disease.

S. Vallon

Relationships between Genito-urinary Infection and Complicating Arthritis.

A study of 76 episodes of arthritis following urethritis or cystitis in sixty patients, here reported from the University of British Columbia, Vancouver, has supplied evidence in support of the conclusions of previous workers in Britain and the USA that the arthritis following gonorrhoea resembles that associated with non-gonococcal urethritis and that both conditions are usually initiated by venereal exposure. Of the 76 episodes studied, sixteen followed proved gonorrhoea. The arthritis in these patients was similar as regards number of joints affected, duration, distribution, and mucocutaneous complications to the sixty episodes associated with non-gonococcal pyuria or urethritis; gonococci could not be isolated from the synovial fluid and penicillin had no effect on the course of the arthritis. T-strain mycoplasmas were found equally in patients with and without arthritis and were therefore not considered to be of aetiological significance; no viruses could be isolated from the conjunctival, synovial, or urethral exudate. In two patients, at least, the arthritis did not follow sexual intercourse, but developed after cystoscopy.

J. H. Baron


Reiter’s Syndrome and N.G.U.

CHEMOTHERAPY
Penicillinase-resistant Penicillins and Cephalosporins.

Several semi-synthetic penicillins are resistant to staphylococcal penicillinase, including methicillin, cloxacillin, “ancillin”, “nafcillin”, and quinacillin. At the Postgraduate Medical School of London these compounds, together with two derivatives of 7-aminopenicilhasporanic acid, cephalothin, and “cephalosporin 87/4”, were tested for antibacterial activity in vitro against Gram-positive and Gram-negative pathogens.

Cephalosporin 87/4 and cloxacillin showed the greatest and methicillin and quinacillin the least bacteriostatic activity against both penicillinase- and non-penicillinase-producing strains of Staphylococcus aureus. However, the activity of methicillin and of quinacillin was least affected by increase in the size of the inoculum and that of cephalosporin 87/4 the most. Five naturally-occurring methicillin-resistant strains were also resistant in large inocula to nafcillin, ancillin, quinacillin, cephalosporin, and cephalosporin 87/4. Concentrations required to kill Staph. aureus were very similar to those for bacteriostasis; the proportion of “persisters” varied from 0 to 5 per cent. of the original population. In 95 per cent. serum the activity of methicillin and of cephalosporin 87/4 was unaffected, but there was a reduction of between two- and eightfold in the activity of the other compounds. At acid pH values all compounds except cephalosporin 87/4 showed enhanced activity, while at alkaline pH values cephalosporin 87/4 showed increased and all other compounds decreased activity.

Against Streptococcus pyogenes, Strep. pneumoniae, and Bacillus anthracis all compounds except quinacillin had high activity; Strep. faecalis was moderately resistant to all the compounds. Strains of Neisseria gonorrhoeae which showed increased resistance to benzylpenicillin also showed greater resistance to all the compounds tested; methicillin was almost as active as benzylpenicillin. All strains of N. catarrhalis and N. meningitidis were sensitive to all compounds tested; against Haemophilus influenzae methicillin and cephalosporin were the most and quinacillin the least active.

None of the penicillins had significant activity against coliform organisms. Both cephalosporin compounds showed activity similar to that of ampicillin against certain Proteus and Klebsiella species. Penicillinase-producing Pr. mirabilis strains, which were resistant to ampicillin, were sensitive to cephalosporin and cephalosporin 87/4, although large inocula were less sensitive. Coliform strains, trained to be resistant to cephalosporin 87/4 by serial passage, had no increased cephalosporinase activity.

The authors conclude that there is little to choose between the penicillinase stable penicillins as regards antistaphylococcal activity in vitro. The two cephalosporin compounds, in their view, show promise of great efficacy not only against penicillinase producing strains of Staph. aureus, but also against certain ampicillin-resistant Proteus and Klebsiella strains.

J. Hamilton-Miller


PUBLIC HEALTH AND SOCIAL ASPECTS


MISCELLANEOUS

At the Northwest Central Clinic, Washington, D.C., the author studied 94 patients (48 men, 46 women) suffering from perirectal abscess or fistula-in-ano or from both conditions, or who had a history of these conditions or signs to suggest that they had been present previously, with the object of ascertaining the frequency of lymphogranuloma venereum in such patients and to show the possible relationship of these lesions in the male to psychosexual inversion. The Frei intradermal test and a complement-fixation test for antibodies to the psittacosis-lymphogranuloma-venereum group of agents were performed in all cases. Where practicable, proctoscopy was carried out on male homosexuals and on patients with perianal lesions.

The result of the Frei test was positive in 56 cases and negative in 38. That of the complement-fixation test was positive in 45 cases and negative in 49. These results were compared with those obtained in a control group of 285 persons (78 homosexual males, 105 heterosexual males, and 102 females) without abscesses or fistulae. In both
groups the results are given separately for homosexual males, for heterosexual males, and for females. There was a higher incidence of positive results with the Frei test and the complement-fixation test among both male and female patients with abscesses, fistulae, or both, than among the corresponding controls, and a higher incidence in homosexual males than in heterosexual males. Among the 78 homosexual males in the control group a total of 36 ano-rectal conditions were diagnosed in 33 patients, three of whom were suffering from two conditions. Proctitis and perianal condylomata acuminata were the most frequently observed conditions, occurring in nine and eight cases respectively. *Treponema pallidum* was isolated from two cases of condyloma lata.

The author considers that lymphogranuloma venereum should always be included in the differential diagnosis of perirectal abscess and of fistula-in-ano. Homosexual males should be examined and tested for lymphogranuloma venereum as a routine measure because of the high incidence of this disease in such subjects. Similarly, homosexual practices should always be suspected when male patients present with ano-rectal disease due to lymphogranuloma venereum.

It would be interesting to know in how many cases the complement-fixation reaction was positive in the presence of a negative Frei reaction, a combination which may be due to infection by TRIC agent. This infection, which is also sexually transmitted, may apparently cause proctitis (Dunlop and others, *Brit. J. vener. Dis.*, 1964, 40, 33; *Abstr. Wild Med.*, 1964, 36, 166).


In human infections by organisms of the psittacosis-lymphogranuloma venereum group antibodies often appear which may be detected by means of a complement-fixation test using as antigen a heated suspension of material from yolk sacs infected by one of the members of this group, all of which share a heat-stable antigen. This test was used from 1950 to 1963 in the Western Hospital Region of Scotland in the investigation of cases of suspected virus pneumonia, undiagnosed fever, venereal syndromes, and other diseases in which infection by one of these viruses was a possibility.

Serological evidence of virus infection was obtained in 45 patients, of whom 24 had pneumonia, ten had lymphogranuloma venereum, five had a non-specific febrile illness, and six had other conditions (two a influenza-like illness, three bronchitis and heart disease, and one lymphosarcoma). In sixteen cases there was no obvious source of infection from birds, but in the remainder, excluding the ten cases of venereal origin, there was some history of contact with budgerigars or pigeons. Although serological evidence of infection by organisms of the psittacosis-lymphogranuloma venereum group was obtained and virus was isolated from birds of both species during the study, direct evidence that the human disease had been contracted from birds was lacking.


A discussion on the allergic nature of this disease and on the value of the treatment by a specific antigen.


The authors present a case of Behçet’s disease with lung and gastro-intestinal manifestations.


Description of a case of a 22-year-old man who for many years had been treated unsuccessfully for a unilateral recurrent hypopyon uveitis associated with aphthous stomatitis, ulcers of the genito-anal region, and erythema nodosum-like skin changes of the legs. The eye was excised and on histological examination showed chronic fibroplastic endophthalmitis. The case is regarded as belonging to Behçet’s syndrome, and from the hypersensitivity to the Mantoux test, strongly positive Kahn reaction (on one occasion), and culture of haemolytic *Staphylococcus aureus* in the blood (on several occasions), as well as from the pathological appearance of the enucleated eyeball (mainly lymphocytic infiltration) an allergy to some infectious agent is postulated as the aetiological background. No viruses could be isolated from the eye.


The syndrome consists of uveitis, oral ulceration, and genital ulceration. It has been stated that pricking the skin with a sterile needle causes a pustule in this condition. A case is reported in which recurrent genital ulceration was present, together with ulceration of the mouth, and ulceration of the hands and feet. Polyarthritis was also present. The appearance of pustulation within 24 hours of pricking the skin with a sterile needle may be regarded as the specific test for Behçet’s disease. Steroid dosage should be increased to the point where the prick becomes non-reactive.

A case of Behçet’s disease is described in which the ulceration of the mouth and penis was cured by the use of:
(a) Local dexamethasone applied in a special adhesive vehicle after meals and at night;
(b) A 3-day course of 4 mg. dexamethasone daily;
(c) 150 mg. dimethylchlortetracycline every 6 hours for 4 days to eliminate secondary infection.

P. G. Watson


A case is presented of recurrent uveitis with hypopyon and retinal thrombosis, associated with phlebitis of the lower limbs.

J. Rougier


Report of a clinical case of a neuro-Behçet syndrome and experimental observations of inoculation of the patient’s material to animal and embryonated eggs.

S. Vallon


This syndrome includes aphthous lesions in the mouth, ulceration of the genitalia, and iridocyclitis with hypopyon. The important characteristic is that the attacks are recurrent and the ocular manifestations appear to be later than the muco-cutaneous lesions. The authors describe four eyes which were examined pathologically and compared with three eyes previously described. The important feature was the combination of non-granulomatous uveitis with perivasculitis retinae, haemorrhagic infarction of the retina, and detachment. Thrombo-phlebitis in various parts of the body has been described in Behçet’s syndrome, and vasculitis retinae has been regarded as an essential manifestation. The hypopyon of vasculitis retinae may be regarded as due to obliterative vasculitis of the iris.

A. G. Cross


Report of a case of Behçet’s disease and a discussion of similar cases.

S. Vallon


Aneurysm of the Sinus of Valsalva? VARADARAJAN, M. G. (1964). Antiseptic, 61, 969. 5 figs, 4 refs.