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).

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)


The authors studied the incidence of syphilitic iridocyclitis in patients treated during 1960-5 at the Eye Clinic in Brno. A specific aetiology of the uveal inflammation was probable in 1·04 per cent. of cases. Attention is drawn to the atypical clinical picture of specific iridocyclitis as observed nowadays and to the necessity for specific serological tests in the diagnosis of syphilitic infection because the classical sero-reactions are relatively unreliable.

M. Klima


SYPHILIS (Therapy)


Four patients with early syphilis were treated as out-patients with cephaloridine. Dosage consisted of 2 g. daily by intramuscular injection, given for 10 days to two patients with primary lesions, for 14 days to one patient with a large primary chancre and inguinal adenopathy, and for 15 days to one who had secondary papular lesions. Primary lesions disappeared within 3 and 7 days, the large chancre healed by the 12th day and the secondary lesions were not in evidence within a month of starting treatment. Serological tests (quantitative Wassermann reaction, VDRL test, and RPCF test) were negative from the beginning and remained so during 9 months observation in one case and became negative in 2 and 3 months respectively in the two other cases of primary syphilis, the VDRL test being the most persistent. In the case of secondary syphilis, the VDRL test was still positive after 5 months. The two patients with sero-positive primary syphilis had a Herxheimer reaction after the first injection of cephaloridine. A penicillin-sensitized woman with secondary syphilis treated with cephaloridine during pregnancy (OLLER, Brit. J. vener. Dis. 1967, 43, 39) was tested 12 and 18 months after treatment; serological tests, including the TPI test, gave negative results and there were no abnormal findings in the cerebrospinal fluid. Her child was followed for one year and showed neither clinical nor serological evidence of syphilis.

[ADDENDUM. The patient with sero-negative primary syphilis ceased to attend after 9 months; the one who had secondary syphilis became sero-negative after 6 months. Serological tests (including the TPI test) and tests of cerebrospinal fluid all gave negative results after 12 months in the three cases which were followed.]

[Author's Summary]
On the Antitreponemic Action of Cephaloridine.


This is an abbreviated version of the paper read at the Cephaloridine Conference at Oxford in March, 1967. The author reviews the work carried out at the Dermatological Clinic and the Institute of Pharmacy of the University of Padua in collaboration with Galla, Pagnes, and Ferrari (Galla et al., Chemoterapia, 1965, 10, 24; Flarer et al., Antibiota, 1965, 3, 216 and 271) and reports on the results of further studies carried out with Berti at the Pharmacological Institute of the University of Bologna (in press).

In preliminary laboratory studies in vitro, cephaloridine inhibited Reiter treponemes in concentrations of 0.5–1 μg./ml. (as compared with 0.06 μg./ml. penicillin G) and immobilized, in 24 hours, 50 per cent. of Nichols treponemes in concentrations of 0.55 μg./ml. (against 0.003 μg./ml. penicillin G). In vivo, three daily intramuscular injections of 2.5 to 5 mg./kg. cephaloridine were found to be effective in curing experimental syphilitic orchitis in rabbits, while penicillin was effective in daily doses of 0.1 to 0.25 mg./kg. However, cephaloridine was more effective than tetracycline and chloramphenicol.

Subsequently 28 patients with early syphilis were treated with cephaloridine by intramuscular injection. Seventeen who had primary syphilis received 250 mg. 12-hrly or 500 mg. 24-hrly for 15 to 20 days, and eleven who had secondary syphilis received 500 mg. 12-hrly for 20 to 32 days. An initial dose of 50 mg. prevented a Herxheimer reaction. The patients, who in earlier reports had been followed for 7 to 10 months, remained under observation for 2 years. Complete serological reversal had been noted by 3 months in sixteen cases of primary syphilis and by 7 months in nine cases of secondary syphilis. After 2 years the tests had remained negative in 27 cases. In one patient with secondary syphilis, positive results to serological tests persisted, in spite of early re-treatment with penicillin and bismuth. Cases of successfully-treated syphilis included an infant with congenital syphilitic periostitis and a pregnant woman near term who after treatment of secondary syphilis gave birth to a healthy child.

The mechanism of antitreponemal action of cephaloridine was studied on Reiter treponemes and was noted to be similar to that of penicillin, consisting of selective interference with the biosynthesis of the cell wall.

L. Z. Oller

Treatment of Early Syphilis with Cephaloridine

Gonzalez-Ochoa, A., and Moreno, J. B. (1967)

At the Instituto de Salubridad y Enfermedades Tropicales, Mexico, 35 patients with early syphilis were treated with cephaloridine, and five controls were treated with penicillin. Cephaloridine-treated patients were divided into seven groups according to dosage (0.5, 1, and 2 g.), frequency of injection (every 6, 8, 12, and 24 hours), and length of treatment (3, 5, and 10 days); in the control group all patients were given benzathine penicillin 2.4 mega-units initially and 1.2 mega-units 8 days later. Dark-field examinations were carried out at 24-hour intervals. In the penicillin-treated group no treponemes were found in the lesions after 24 hours. In the cephaloridine-treated groups the rate of disappearance of treponemes from the lesions was directly related to the dosage and frequency of injection. Nevertheless, even in those cases in which treponemes were found after 72 hours, surface lesions disappeared approximately within one week and the titre of reagin was reduced by a minimum of two dilutions at the latest on the 75th day after treatment. The rate of healing of lesions and resolution of associated adenopathy was similar to that in the penicillin-treated group. A Herxheimer reaction was observed in 72 per cent. of the patients treated with cephaloridine. Follow-up serological tests were performed at 15-day intervals for up to 90 days. Reduction in titre of reagin was more satisfactory in some of the cephaloridine-treated groups than in the penicillin-treated group. There was no indication of cross-allergy with penicillin in five cephaloridine-treated patients who had a history of penicillin hypersensitivity. The authors conclude that "although for obvious reasons cephaloridine is no substitute for penicillin in the treatment of early syphilis, it is to be preferred to other antibiotics in cases of penicillin sensitivity".

L. Z. Oller


SYPHILIS (Serology)


Absorbed FTA tests were performed on 1,182 sera submitted for TPI tests because they presented diagnostic problems. There was overall agreement between the two tests in 92 per cent. of the sera. 509 (98 per cent.) of 512 sera which were reactive in the TPI test were also reactive in the FTA-ABS test, and 515 (86 per cent.) of 597 TPI-negative sera gave negative FTA-ABS results, the latter test being only weakly reactive in most of the 82 discrepancies. There was a previous history of syphilis in 22 per cent. of these patients but in 50 per cent. no reason for reactivity in the FTA-ABS test was apparent. Although the possibility of non-specific reactions was
present in a small percentage of the problem sera tested, it is thought to compare favourably with the TPI test and its simplicity recommends it.

The suspension of Nichols treponemes was prepared by extracting the testes of rabbits infected 7 days previously with TPI medium, containing 10 units heparin per ml., for 5 minutes. The first extract contained much tissue debris and was discarded and a further extraction carried out for 45 minutes with fresh medium. This was centrifuged at 2,000 r.p.m. for 10 minutes, the supernatant being stored in the refrigerator for 2 days before standardization to a density to fifty treponemes per high dry field and lyophilization. Fixation in 10 per cent. methanol in distilled water for 5 minutes was thought preferable to fixation in acetone. The preparation of the absorbing agent (a heated filtrate of a 10-day-old culture of Reiter treponemes in thioglycollate broth with 10 per cent. heated rabbit serum) is described.

A. E. Wilkinson


In this paper from USAF Hospital Andrews, Washington DC, the authors report a new simple technique for the diagnosis of syphilis. VDRL-test antigen unitied to an inert carrier is used. The test can be performed on serum or plasma and the results can be read with the naked eye. One drop of serum or plasma is mixed on a slide with a drop [presumably equal in volume] of antigen; the slides are rotated mechanically or by hand at 180 r.p.m. for 4 minutes and are then examined by oblique lighting; positive results appear as large clumps.

In the present study 10,729 specimens from a variety of sources, including suspected cases of syphilis, were examined in parallel by the above screening test and the classic VDRL slide test. Complete agreement between the results of the two tests was found, 211 sera being reactive by both methods. Quantitative tests were performed on 110 of these reactive sera and the titres of each method were in very close agreement; three sera gave prozones with both antigens. Reiter protein complement-fixation and fluorescent treponemal antibody tests were also performed in these 110 sera: 63 gave positive results with both confirmatory tests.

The authors conclude that the test they describe is suitable for screening small or large numbers of sera because of its speed and simplicity. The antigen is said to be stable for at least 6 months in the refrigerator.

A. E. Wilkinson


BIOLICAL FALSE POSITIVE PHENOMENON


It is generally thought that patients with chronic biological false positive (CBFP) serological reactions for syphilis tend to develop autoimmune disorders, especially systemic lupus erythematosus (SLE). In this paper from the University Central Hospital, Helsinki, the authors discuss 81 cases of the CBFP reaction (the criteria for which are given). Each patient was assessed for SLE according to 25 criteria. The follow-up time ranged from 7 months to 26 years (mean 5 years).

24 patients developed "definite" or "probable" SLE; only one of the sixteen male patients developed definite SLE but fourteen of the 65 female patients did so. All the patients with definite or probable SLE fulfilled one or more minor diagnostic criteria at the time of discovery of the CBFP reaction; in four cases sufficient criteria existed for a diagnosis of definite SLE even before the CBFP reaction was detected. Young women tended to develop acute or subacute SLE within 2 years of the occurrence of the CBFP reaction, but older women developed chronic disease after a longer interval. "Definite" or "probable" rheumatoid arthritis (ARA criteria) developed in nine patients.

The authors suggest that the CBFP reaction has been over-emphasized as a harbinger of SLE; however, if taken in conjunction with age and sex it has definite prognostic value.

M. Wilkinson

FTA-ABS, TPI and VDRL tests were performed on sera from 177 patients who had shown reactivity in lipoidal antigen tests which was thought to be non-specific in nature; 31 of them had no clinical symptoms and 146 were suffering from a wide variety of disease conditions.

There was clinical or historical evidence of latent or late syphilis in 44 patients; in this group the sensitivity of the three tests was: FTA-ABS, 93 per cent.; VDRL, 82 per cent.; TPI, 56 per cent. In a further group of 95 patients with diseases other than syphilis, both the TPI and FTA-ABS tests were found positive in three instances and there was agreement between the results of the two tests in 82 sera (86 per cent.); the FTA-ABS test was reactive but the TPI test negative in thirteen instances. Agreement was also found in 87 per cent. of thirty sera from asymptomatic patients with reactive lipoidal antigen tests and in 86 per cent. of sera from 64 patients who showed abnormalities such as the presence of rheumatoid factor or L.E.-cell factor. Sera from seventy patients were tested for the presence of anti-nuclear antibodies, which have been claimed to produce false positive FTA tests (Neblett and others, 1964, *J. invest. Derm.*, 43, 439). No evidence was found to suggest that this was related to reactivity in the FTA-ABS test.

The results suggest that because of its specificity and high sensitivity, the FTA-ABS test is of value in the investigation of problem sera. A. E. Wilkinson

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**SYPHILIS** (Pathology)


**SYPHILIS** (Experimental)


At the Department of Microbiology of the Toho University School of Medicine and the Tokyo-to Laboratories for Medical Sciences, Tokyo, the efficacy of cephaloridine in experimental syphilis of rabbits was compared with that of penicillin. Two groups of twelve rabbits were infected with Nichols strain *Treponema pallidum*, one group intracutaneously and the other intratesticularly; 10 days after infection ten rabbits (five in each group) were treated with cephaloridine 30 mg./kg. and ten with penicillin 50,000 units/kg. intramuscularly twice daily for 10 days. Two rabbits in each group were untreated and served as controls. In rabbits infected intracutaneously slight reddening and induration developed at all four inoculation sites on about the 8th day. In untreated rabbits the lesions later underwent central necrosis and crusting which persisted for 30 days or more. In five rabbits treated with cephaloridine and four treated with penicillin normal skin was restored within 7 days of starting treatment. Testes were removed...
GONORRHOEA

22 refs.

As might be expected, the rise in the incidence of gonococcal infections in the populations of many countries has led to an increase of such infection among children. During 6 months in 1965 the author, at the Strong Memorial Hospital, Rochester, New York, saw nine cases of gonorrhoea in children under the age of 15 years and in this paper he gives details of two of these patients and then reviews the subject “for the benefit of those physicians who must recognize and deal with similar cases”. All nine children had bacteriologically proven gonococcal infection: two of the girls (aged 2–4 years) presenting with vaginal discharge had mothers with gonorrhoea, one 11-month-old boy had gonococcal conjunctivitis and his brother had urethritis, and the remaining three boys and one girl (aged 9–14) had venereal infections.

The author concludes that children infected before puberty consist of those who are the unwitting victims of someone else’s gonorrhoea, a group which includes cases of ophthalmia neonatorum and vulvovaginitis, and others whose curiosity or impulses have led to contact with diseased partners. The dividing line between one group and the other is indefinite but may be around the age of 9 or 10 years. He gives a brief account of evidence on the epidemiology of these infections, some details of methods of diagnosis and treatment, and some observations on the reasons for increased promiscuity among children before and after puberty. Finally, he stresses the importance of health education in prevention and emphasizes that it is the duty of physicians to be aware of the problem and to play their part in prevention, diagnosis, and treatment.

A. J. King


From the Communicable Disease Control and Shelby County Health Department, Memphis, Tennessee, the authors report a comparative trial of two different penicillin preparations in the treatment of gonorrhoea. The patients were divided randomly into two groups. Group A received 0.6 mega-unit potassium penicillin G and 0.6 mega-unit procaine penicillin G together with 1·2 mega-units benzathine penicillin G—a long-acting penicillin. Group B received only short-acting penicillin—1·2 mega-units potassium penicillin G and 1·2 mega-units procaine penicillin G. Follow-up examinations were carried out at 1 and 5 weeks after treatment; the fluorescent antibody test was used throughout.

Group A: 540 men with confirmed gonorrhoea were treated; 345 of these were seen at 1 week, when specimens from fourteen (4 per cent.) gave positive results, while at 5 weeks 220 were seen and nine (4 per cent.) had positive results. Group B: 540 men with gonorrhoea initially; 352 were seen at 1 week, when 33 (9 per cent.) had positive results, and 233 at 5 weeks when 58 (25 per cent.) had positive results.

The female contacts of these patients received the same treatment schedule as their partners. In Group A, 293 were initially found to have gonorrhoea; at 1 week sixteen (7 per cent.) out of 237 had positive results, and at 5 weeks, nine (5 per cent.) out of 175 had positive results. In Group B, 304 had gonorrhoea initially; at 1 week the results were positive in 25 (10 per cent.) of 253 cases and at 5 weeks in twelve (6 per cent.) of 188.

The authors conclude that for men the treatment schedule containing the long-acting benzathine penicillin G was not only more effective therapeutically but also afforded some protection against re-infection. This was not so for women.

[No attempt was made to differentiate between failure or relapse and re-infection. Sensitivity studies are not reported.]

R. S. Morton

Do Results of Culture for Gonococci Vary with Sampling Phase of Menstrual Cycle? [In English.] FALK, V., and KROOK, G. (1967). Acta derm.-venereol. (Stockh.), 47, 190. 2 figs, 8 refs.

It is widely believed that gonococci are more readily isolated from the cervix after menstruation than before it. In the present study, made at the General Hospital, Malmö, Sweden, this assumption is investigated. In all, 737 patients with acute uncomplicated gonorrhoea and 230 patients with acute gonococcal and non-gonococcal salpingitis who could date the onset of their symptoms in relation to the menstrual cycle were studied. It was found that samples collected during the first half of the cycle gave essentially similar isolation rates for gonococci as samples taken during the second half of the cycle; thus the isolation of gonococci is independent of the menstrual phase in which specimens are collected. It was also found that patients with or without salpingitis presented themselves for examination more commonly during the first half of the menstrual cycle than during the latter half. This is believed to be due to the fact that patients are less inclined to seek medical advice just before the expected menstruation than when menstruation is over. The possibility of isolating gonococci by culture is just as good if specimens are taken before menstruation as if they are taken after it.

G. W. Csonka

The possible influence of penicillinase-producing staphylococci in the urethra on the efficacy of penicillin therapy for gonorrhoea is discussed in this report from Karolinska Sjukhuset, Stockholm. Penicillinase-producing staphylococci were sought in the urethrae of 183 male patients with gonorrhoea and found in 84 (45·9 per cent.). All the patients were treated with 1·2 mega-units of procaine penicillin; nine failed to respond and penicillinase-producing staphylococci were found in five of these cases; however, the sensitivity of the gonococci to penicillin was reduced in all nine cases.

The results suggest that penicillinase-producing staphylococci in the urethra have no demonstrable influence on the outcome of penicillin treatment, but it is nevertheless conceivable that their presence causes therapeutic failure in individual cases. B. Schwartz


The increase in incidence of gonorrhoea throughout the world has been attributed partly to failure of penicillin treatment associated with a decreased susceptibility of *Neisseria gonorrhoeae* to this antibiotic. A study was made in the Bacteriology Laboratory of the Prince of Wales Hospital, Randwick, New South Wales, to determine the sensitivity of strains of *N. gonorrhoeae* isolated in Sydney and Newcastle to penicillin. Altogether 104 strains of *N. gonorrhoeae* were tested: each strain was tested at least twice and the sensitivity remained constant. [For details of the technique employed the original paper should be consulted.] 58 (56 per cent.) of the strains were sensitive to a penicillin concentration of 0·05 unit/ml. and 46 (44 per cent.) were relatively resistant even to increased concentrations of penicillin.

The authors consider that failure to control gonorrhoea may be due to the type of penicillin (procaine or benzathine penicillin) used and also to inadequate dosage. They express a preference for multiple injections of benzylpenicillin.

[Long-acting preparations such as benzathine penicillin, which produce low blood levels, should not be used in the treatment of gonorrhoea. The clinician dealing with outpatients suffering from uncomplicated gonorrhoea will favour treatment with a single dose given by injection. Procaine penicillin (not suspended in oily medium) is an efficient remedy used in this way and the dosage should not be less than 1·2 mega-units. Good results from this form of treatment in a large series of cases, and from 2·4 mega-units with the addition of probenecid by mouth, have been reported.] E. Dunlop


Conjugates specific for IgG, IgM, and IgA were used in a fluorescence technique to detect serum antibodies against the heat-labile (surface) and heat-stable (somatic) antigens of the gonococcus. Natural antibodies were studied in the sera of ten children and in sera from ten adults with no previous history of gonorrhoea. IgG antibodies were found more reactive with the heat-stable than the heat-labile antigen whereas the natural IgM antibody reacted to about the same titre with both. IgA antibody reacted to a low titre with the heat-stable antigen only, except for one serum. Tests on sera from patients with gonorrhoea showed that the IgG and IgM titres against the somatic antigen fell in, or close to, the normal range; those against the surface antigen were raised, the difference being more pronounced with IgG than IgM. IgA titres were raised against the heat-stable antigen and in some cases against the surface antigen also.

Treatment of an immune serum with 2-mercaptoethanol reduced but did not abolish reactivity of IgM against both antigens; it was without effect on IgG titres and the response of IgA to this treatment was variable.

Immune IgG antibody was less affected by heat than natural antibody while both natural and immune IgM antibodies were equally sensitive to heat. In contrast, IgA activity appeared to be increased by heating both normal and immune sera to 60°C. A. E. Wilkinson

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The results are reported of a trial of cephaloridine in a series of 104 patients with urethral gonorrhoea attending the Whitechapel Clinic, the London Hospital. Post treatment gonorrhoea occurred in seven (12·1 per cent.) of 58 patients treated with 1·5 g. cephaloridine in single doses, and in three (6·5 per cent.) of 46 patients given single injections of 2 g. While cephaloridine was being used, intramuscular doses of 2 g. kanamycin resulted in post-treatment gonorrhoea in 2 to 3 per cent., and the routine treatment of other patients with intramuscular injections of 1·2 mega-units aqueous procaine penicillin was followed by post-treatment gonorrhoea in 3·3 per cent.

Swabs of the urethral secretion were taken from all patients before treatment and were sent in Stuart’s medium to Glaxo laboratories. When gonococci were isolated in pure culture, the sensitivity of the organisms to penicillin and cephaloridine was assessed. Parallel studies of the sensitivities of 22 strains of *N. gonorrhoeae* gave no indication of cross-resistance between the two antibiotics. L. Z. Oller

At the V.D. Clinic, St. Luke's Hospital, Bradford, 142 patients with various forms of gonorrhoea were treated with a single intramuscular injection of approximately 30 mg./kg. cefaloridine. Of 100 men with urethral gonorrhoea, 67 were cured, four failed, three were re-infected, and 26 ceased to attend before assessment. Of 37 women, 24 were cured, three failed, one was re-infected, and nine ceased to attend. Five patients with rectal gonorrhoea, three men and two women, were all cured. A young girl with vulvovaginitis who weighed 17.3 kg. did not respond to 500 mg., though both her parents were successfully treated with cefaloridine. A neonate with ophthalmia was cured with a single dose of 125 mg. cefaloridine.

The effect of cefaloridine was related to the degree of sensitivity of the gonococcus to penicillin *in vitro*. Six of the seven failures in adults occurred in a group of 35 cases in which 0.125 units penicillin disks failed to inhibit the growth of gonococci (17.1 per cent. failure rate); in five of these cases the gonococcus was resistant to 0.25 units penicillin and 5 µg. cefaloridine disks. In contrast, there was only one failure in 103 cases in which the organisms were sensitive to 0.125 units penicillin (0.9 per cent. failure rate). These results are similar to those obtained in a previously reported series of 130 patients, all treated with a single dose of 2 g., in which the failure rate in relation to the sensitivity of gonococci to 0.125 units penicillin disks was 18.5 and 0.9 per cent. respectively (Oller, Brit. J. vener. Dis., 1967, 43, 39).

Comparison of the results *in vitro* with the clinical response suggests that, if the minimum inhibitory concentration of penicillin is 0.25 units or less, the chances of cure with a single dose of cefaloridine or penicillin are good, but if the gonococcus is resistant to 0.25 units, it is usually resistant also to 5 µg. cefaloridine, and then higher doses of either of the two antibiotics are required.

Nine of the patients were known to be sensitized to penicillin, but none had an untoward reaction to cefaloridine.

Author's summary

[The two papers on the use of cefaloridine in gonorrhoea were read at the Cefaloridine Conference held in Oxford, March 13 to 16, 1967. At the ensuing discussion (Postgrad. med. J., 1967, 43, Suppl. Aug., p. 135) it was confirmed by Ridley from St. Thomas' Hospital, London, (by tube dilution) and by Ericson from the Karolinska Institute, Stockholm (by the disk method) that in *vitro* the sensitivity of the gonococcus to cefaloridine is closely related to its sensitivity to penicillin.

At the same conference Keay, Syme, and Barnes (Postgrad. med. J., 1967, 43, Suppl. Aug., p. 105), Burland and Simpson (Ibid., p. 112) and Marget (Ibid., p. 115) reported that in early infancy single intramuscular injections of 30 mg./kg. produced very high and prolonged serum levels of cefaloridine. This would explain the success attained with this dose in the case of gonococcal ophthalmia neonatorum.]

L. Z. Oller


NON-GONOCOCCAL URETHRITIS AND ALLIED CONDITIONS


71 male patients with non-gonococcal urethritis (NGU) were treated with cefaloridine. The doses ranged from a single injection of 1 g. to two injections of 2 g. (five dosage schemes in all), and the cumulative cure rate was 41 per cent. in 64 patients followed. These results were compared with those previously reported (Csonka, Postgrad. med. J., 1967, 43, Suppl. May, p. 63) in two series of patients with NGU, 77 treated with kanamycin (by a single injection of 2 g. or four daily injections of 1 g.) and 140 treated with tetracycline phosphate complex (Tetrex) 250 mg. four times a day for 4 days, in which the cure rates were 67 and 89 per cent. respectively.

91 male patients with urethral gonorrhoea were treated with cefaloridine by three dosage schemes (single injections of 1 g. and 2 g. and two daily injections of 1 g.); NGU developed in eight (15 per cent.) of those observed for at least one month after the cure of gonorrhoea. This was compared with the incidence of post-gonococcal NGU after the treatment of gonorrhoea with other antibiotics, viz. 6 per cent. after 4 g. tetracycline, 13 per cent. after 2 g. kanamycin, and 22 per cent. after 1·2 meg-units penicillin.

*Mycoplasma hominis* and T-strain mycoplasma isolated from the urethral discharge of patients with NGU were
tested in vitro for sensitivity to cephalexin and the three other antibiotics. The strains were noted to be very sensitive to tetracycline, less sensitive to kanamycin, and resistant to cephalexin and penicillin. It may be significant that the results in vitro agreed with the therapeutic effect of these antibiotics in NGU.

L. Z. Oller

Probable Trichomonas vaginalis Epididymitis. AMAR, A. D. (1967). J. Amer. med. Ass., 200, 417. 5 refs. [From the Kaiser Foundation Hospital, Walnut Creek, California.]

Trichomoniasis, long considered a gynaecological problem, has also been recognized within recent years to be a cause of urethritis and prostatitis in men. In the three cases reported here, epididymitis was associated with the presence of Trichomonas vaginalis on culture of the urine or prostatic fluid for this organism. The epididymitis, unresponsive to antibiotic therapy, cleared promptly upon administration of metronidazole. This drug, the first effective anti-Trichomonas agent to be taken orally, is specific and of low toxicity. Treatment of both sexual partners is recommended. [Author's summary]


REITER'S DISEASE AND ALLIEd CONDITIONS


This paper from Georgetown University Medical Center, Washington DC, described two properties of the synovial fluid in Reiter's syndrome which are sufficiently constant and specific to be of diagnostic value.

All of eleven patients studied during the acute phase of the disease had complement levels in the synovial fluid greatly in excess of normal. Thus, complement activity measured in terms of its haemolytic potential (C') was never less than 140 C'H₉₀ units [1 C'H₉₀ unit being the amount of complement required to lyse 7.5 x 10⁷ sensitized sheep cells (Pekin and Zvaifler, J. clin. Invest., 1964, 43, 1372)], whereas in normal fluid the value was never more than 30 C'H₉₀ units. Moreover, the levels in Reiter's syndrome were also much higher than those found in rheumatoid arthritis and gout, in which the median values were 43 and 102 C'H₉₀ units respectively.

A second feature in all the synovial fluids was the presence of large macrophages containing within their cytoplasm both intact neutrophil polymorphonuclear leucocytes and degenerated nuclear remnants; such macrophages accounted for up to 3 per cent. of the total cell population. Examination of over 200 samples from patients with rheumatoid arthritis, Still's disease, ulcerative colitis, psoriatic arthropathy, gout, chondrocalcinosis, and infectious arthritis showed such cells in only two instances, both of these being cases of Gram-negative bacterial infection. The possibility that macrophages containing polymorphonuclear leucocytes represent a response to an endotoxin was supported by the finding of these cells in the synovial fluid of rabbits injected with such material, and the authors accordingly suggest that endotoxins may also play a part in Reiter's syndrome.

A. Garner

ANTIBIOTICS AND CHEMOTHERAPY


PUBLIC HEALTH AND SOCIAL ASPECTS


MISCELLANEOUS


Five cases of active yaws, one in an infectious stage, were diagnosed among West Indians resident in the Coventry area in the period 1962–6.

Case 1 was a 10-year-old West Indian boy who had emigrated 18 months previously from a parish in Jamaica with a high incidence of yaws. He presented with six papillomata on the scalp, one on an eyelid, and one near to the angle of the mouth, the last being dark-field positive; these lesions were probably of about 3 months' duration. In addition there was extensive "cigarette-paper" scarring on the legs and knees of about 3 years' duration. The Wassermann and Price's precipitation reactions and the Reiter protein complement-fixation test were all strongly positive and the active lesions healed.
within 2 weeks of starting a course of penicillin, 0.6 mega-units intramuscularly daily for 10 days. The parents and their six other children were examined and all except a 14-months-old baby had evidence of previous yaws infection in the form of scars. In Case 2, the 12-year-old brother of Case 1, there were also lesions of the scalp suspected of being infectious despite a history suggesting earlier treatment.

Case 3 was a Jamaican boy aged 12 years originating from the same parish who had also emigrated 18 months previously. Shortly after his arrival in England he developed a painless ulcer over the left wrist and then numerous sores on the lower limbs. He presented with painful swelling of the right knee; cortical defects of both tibiae and irregularities of both joint surfaces in the right knee were demonstrated radiologically, and the results of the WR, PPR, and RPCFT were strongly positive. The signs and symptoms subsided one week after treatment with penicillin.

Cases 4 and 5 were adult male Jamaicans, the first with soft tissue swelling of the right middle finger and the second with active tibial periostitis; in both cases the reagin and treponemal tests gave positive results. There was swift response to treatment with penicillin in the first case; the second patient defaulted.

J. A. H. Hancock


Many reports have suggested a viral aetiology for Behçet's syndrome; more recently an autoimmune mechanism has been postulated. In this paper from Guy's Hospital Medical School, London, the author reports a study of 21 patients with Behçet's syndrome and 100 patients with recurrent focal oral ulceration. Haemagglutination, complement fixation, and Ouchterlony's precipitation tests were performed to detect antibodies against foetal oral mucosa and other foetal tissues. [For details of the techniques used the original paper should be consulted.]

The patients with Behçet's syndrome were grouped according to the type of oral ulceration they displayed. One patient could not be classified in this way; of the remaining twenty, twelve had the aphthous (including the "periadenitis") and eight the herpetiform type of ulcer. The oral lesions in each of these groups of patients were not distinguishable from those in patients with focal oral ulceration of the corresponding type, but the distribution was different: herpetiform ulcers were 8:4 times commoner in Behçet's syndrome than in focal oral ulceration.

Eighteen of the sera from the patients with Behçet's syndrome showed haemagglutination titres of more than 1:40, but only three out of twenty sera from normal controls did so. The antibodies were absorbed by extracts of several kinds of foetal tissue but not all. The incidence of haemagglutination in the patients with aphthous forms of Behçet's syndrome (83.3 per cent.) was similar to that in the patients with the herpetiform variety (87.5 per cent.), but the corresponding groups of patients with focal oral ulceration differed from each other significantly (70 and 30 per cent. respectively). The complement fixation and Ouchterlony precipitation tests gave results for each group of patients that were qualitatively similar to those given by the haemagglutination tests.

The author concludes that while these results provide evidence of a possible autoimmune mechanism in Behçet's syndrome its exact nature remains unclear. The clinical, therapeutic, and pathological difference between the herpetiform and aphthous forms of Behçet's syndrome suggest that there may be two aetiologically distinct varieties of the condition.

Editorial Abstract


Behçet's syndrome has shown itself to be a polymorphic clinical entity. Eleven cases, all of Middle Eastern extraction, were observed, in which thrombophlebitis was more frequent (45 per cent.) than ophthalmological complications (28 per cent.). Aphthous stomatitis was present in 100 per cent., ulceration of the genitals in 91 per cent., orchitis in 37 per cent., epididymitis in 9 per cent., joint pathology in 9 per cent., and erythema nodosum-like rashes in 28 per cent. The central nervous system was affected in 28 per cent., three cases with various neurological symptoms being described in detail. Apart from the cases with neurological manifestations, life expectancy seemed to be good, and the only serious complication was loss of vision. The therapeutic methods used (steroid, antibiotics, and an anti-viral agent) are evaluated. They did not change the course of the disease, producing symptomatic relief only. In four patients reduction of serum g-globulin was found during the florid state of the disease. Transfusion of fresh blood, plasma, and g-globulin induced remissions in some patients. One case of a patient in whom several methods of treatment were tried is reported in detail.

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