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 (General, Pathology, Therapy); Gonorrhoea (General, Pathology, Therapy); Chemotherapy; Other Venereal Disease Conditions; Public Health; Miscellaneous. After each subsection of abstracts follows a list of articles that have been noted but not abstracted. All subsections will not necessarily be represented in each issue.

SYphilis (General)


Amongst 761 necropsies performed between 1944 and March, 1950, at the Instituto Nacional de Cardiologia, Mexico, there were 746 cases of cardiovascular disease in 100 of which (13-4 per cent.) aortic syphilis was present (eighty males, twenty females, mean age 43-5 years). A history of primary syphilis had been obtained in 58 per cent., of secondary syphilis in 9 per cent., and of both in 58 per cent. of 66 complicated cases, serological reactions had been positive in 95 per cent., and antisyphilitic treatment had been absent or inadequate in 93-6 per cent. The average interval between infection and cardiovascular symptoms was 29-3 years. From the onset of symptoms the average duration of life was 4-5 years, irrespective of the presence or absence of aneurysm; about half died within the first 2 years.

The occurrence of descending myocarditis was especially studied; this was found in 21 cases, amongst which the electrocardiographic signs of incomplete left bundle-branch block, as described by Friedland and others (Arch. Inst. cardiol. Mex., 1949, 19, 341), were found four times as often in those without myocarditis. The clinical diagnosis of descending myocarditis may be made tentatively on the following grounds: paroxysmal dyspnoea as the initial clinical sign; cardiac failure refractory to treatment in the absence of aortic regurgitation or coronary disease; and incomplete left bundle-branch block, particularly in cases without aortic regurgitation. Descending myocarditis had no influence on the duration of life, and in cases of syphilitic aortitis was found capable of producing cardiac failure in the absence of aortic regurgitation or coronary involvement.

[The criteria cited for the diagnosis of incomplete left bundle-branch block are not universally accepted as pathognomonic; those interested in this subject may wish to consult Sodi-Pallares and others (Amer. Heart J., 1950, 40, 655). Electrocardiographic data were available in only fourteen of the cases with, and thirty without, myocarditis.] A. SCHOTT


Juvenile Tabo-Paresis. (Tabo-paralysie générale juvénile.)


**SYPHILIS** (Pathology)


Three groups each of twenty rabbits were inoculated intratesticularly with approximately 5 million *T. pallidum* (Nichols strain) and two further groups of thirty animals with a similar dose of *T. pertenue* (YC strain) by the same route. After periods of 7, 9, and 10 months in the animals infected with *T. pallidum*, and 7 and 9 months in the animals infected with *T. pertenue*, treatment was given. This consisted of a total dose of 64,000 units/kg. of procaine penicillin with aluminium monooxystearate in four equal daily doses. Specimens of blood for the treponemal immobilization test were taken before treatment.

Six weeks after treatment the animals were challenged by the intracutaneous injection of graded doses of from $10^2$ to $10^4$ organisms. After observation for 4 months lymph node transfers were carried out on those animals which did not develop lesions. [The results of this part of the investigation are not reported in the present paper.]

Both the "syphilis" and the "yaws" groups of rabbits showed a solid chancr immunity after reinoculation with the homologous strain but those originally infected with yaws showed little or no immunity to syphilis, developing lesions after inoculation with as few as 100 *T. pallidum*. This lack of immunity was not correlated with the duration of the yaws infection prior to treatment nor to its activity at the time of treatment. The rabbits originally infected with *T. pallidum* only showed a low degree of immunity when challenged with *T. pertenue*, even though the suspension was of low virulence.

Immobilization tests on the sera of ten syphilitic rabbits showed high immobilization titres. Tests on eleven animals originally infected with *T. pertenue* showed substantial immobilization titres against *T. pallidum* although lower than in the syphilitic animals; despite this, nine of the eleven developed lesions when challenged with *T. pallidum*. A. E. Wilkinson


These studies were carried out in the University of Kanazawa, Japan, in the early days of the late war and were originally published in Japanese in 1941.

It had already been demonstrated that a vaccine of killed treponemes is ineffective in preventing syphilitic infection in rabbits. The authors claim that tissue treponemes treated with dilute "antiformin" (sodium hypochlorite) show marked agglutination with syphilitic sera in vitro, and when injected into rabbits produce agglutination in high titre. Using rabbits immunized with killed vaccines as controls, they found that the chance-inhibiting power of rabbits immunized with a heavy inoculum of antiformin-treated treponemes was 7 to 18 times as great as that of the control animals against intracutaneous infection, and that this refractory state of the animals persisted for 2½ months after vaccination. Popliteal glands of immunized asymptomatic animals were later removed and introduced into the scrotum of normal rabbits, but failed to produce lesions.

G. L. M. McElligott

**METHOD**


**Quantitative Cardiolipin Test for Syphilis in Routine Use.** (Der quantitative Cardiolipin-Test zum Luesnachweis im Routinegebrauch.) Hoppe, H. H. (1951). *Z. Haut- u. Geschlr.*, 11, 496. 23 refs.

Citochol-Titer. A Contribution to the Improvement of the Laboratory Diagnosis of Syphilis. (Der Citochol-Titer. Ein Beitrag zur Verbesserung der serologischen Lues-Diagnostik.) ROELCEKE, K., and HEB, —. (1951) Z. ImmunForsch., 109, 16. 5 figs, 2 refs.


SYPHILIS (Therapy)


ACTH (corticotrophin) fails to inhibit or suppress the morphological changes of the Herxheimer reaction produced by penicillin in experimental syphilis in the rabbit. It thus acts in syphilis as in tuberculosis, where neither cortisone nor ACTH abolishes the tuberculin skin reaction in animals with active tuberculous infection.

G. M. Findlay


A series of 135 cases of early syphilis was divided into five groups and each group was treated with a different penicillin regimen. The patients adequately followed-up numbered 78 and were treated as follows:

1. daily injections 600,000 units of penicillin in oil-beeswax for 15 days (32 cases);
2. thrice-weekly injections 600,000 units of penicillin in oil-beeswax for 10 weeks (17 cases);
3. a single injection of 1-2 mega units procaine penicillin with aluminium monostearate (PAM) (14 cases);
4. two injections of 1-2 mega units PAM at an interval of 1 week (10 cases);
5. weekly injections of 1-2 mega units PAM for 4 weeks (5 cases).

It is claimed that the total number of unsatisfactory serological responses in all groups was eleven (14-1 per cent.), of which four were regarded as probably due to re-infection. PAM appeared to be more successful therapeutically than the oil-beeswax preparation, but there was no obvious difference in results between doses of 1-2, 2-4, and 4-8 mega units of penicillin.

ABSTRACTS

149
[The groups are not only too small for valid comparisons to be drawn between them, but no less than 42 per cent. of the original total (64-3 per cent. of one of the groups) were lost to observation before even 6 months had elapsed. These circumstances place certain limitations on the value of any conclusions drawn.]

R. R. Willcox


The authors, after briefly reviewing previous work on the subject, describe a series of eleven cases of neurosyphilis treated with chloramphenicol in the Dermatological and Neurological Clinics of the University of Milan.

Levo-rotatory chloramphenicol was given in doses of 2 g. daily for the first 14 days, followed by 1-5 g. daily to a total varying from 32 to 62 g. For serological control, complement deviation tests with lipid and treponemal antigen were used. Details are given of the clinical features, treatment schedule, and results in each case, together with a Table embodying the serological data. The follow-up period ranged from 3 to 6 months.

In two cases of tabes dorsalis the response was good and moderate respectively, with improvement in coordination and walking. In three other patients with tabetic crises in the joints there was complete remission of the pain and improvement in walking. Of two cases of tabes associated with optic atrophy, one showed no response to treatment, but in the other further deterioration was prevented. Of two patients with progressive paralysis, one was able to return to his work as an upholsterer with a fair degree of efficiency, but the other had to be certified insane after classical treatment has also failed. Two patients with syphilitic meningo-encephalitis derived no benefit from the treatment. The serological reactions in all these cases ran roughly parallel with the clinical picture. Chloramphenicol did not give rise to any side-effects, and its presence in the cerebrospinal fluid was confirmed by lumbar puncture in three cases. The authors feel that cases not previously treated respond better to chloramphenicol.

Ferdinand Hillman

**Oral Treatment of Neurosyphilis with Aureomycin:**


At the Mayo Clinic the authors treated twelve patients suffering from neurosyphilis with aureomycin by mouth and observed them for an average period of 409 days: dosage varied from 62.5 to 112.5 g., usually extended over 20 to 30 days.

Of three patients with asymptomatic neurosyphilis all showed marked reduction in cell count, protein level, and colloidal gold curve, but little change in the Kolmer reaction of the cerebrospinal fluid (C.S.F.); one patient showed evidence of C.S.F. relapse and was given a second course of aureomycin. Two patients with meningovascular neurosyphilis both showed clinical and pathological improvement. One patient with tabes, who had received no benefit from 6 mega units penicillin, gained 8 lb. (3-6 kg.) in weight after 62-5 g. aureomycin, the laryngeal spasms and diplopia being reduced. In one patient with taboparesis there was healing of a syphiloderm with general improvement after 50 g.: C.S.F. protein level fell from 280 to 45 mg. per ml., cell count from 56 to 2 per c.mm., and colloidal gold curve from a typical paretic to normal. Of five patients with paresis, in one the C.S.F. became normal in all respects and in four others there was considerable pathological improvement; one showed progressive mental deterioration, but the other three were improved. In no case was the blood reaction improved.

In this series the greatest improvement tended to occur in the first 6 to 10 months, and was at least as great with penicillin; some patients suffered from nausea and vomiting, but these ceased when the dose was reduced. It is concluded that aureomycin is particularly indicated in patients who are resistant or sensitive to penicillin.

T. E. Osmond

**Treatment of Neurosyphilis—One- to Six-Year Follow-up of Patients Treated with Penicillin at the Boston Psychopathic Hospital. Comparison of Results with Penicillin Alone and Combined Penicillin—Malaria Therapy.** PERLO, V. P., ROSE, A. S., CARMEN, L. R. and SOLomon, H. C. (1951). *Amer. J. Syph.*, 35, 559.

The authors treated 469 patients suffering from various forms of neurosyphilis with penicillin alone or penicillin combined with fever therapy (malaria or heat cabinet); the results have been analysed in 365 who have been observed for one year or longer (average 4 years). The following were the diagnoses: general paralysis and taboparesis, 263; tabes, 47; meningo-vascular neurosyphilis, 25; primary optic atrophy, three; and asymptomatic neurosyphilis, 27. The dosage of penicillin was 3 mega units at first, later increased to 6, and finally to 9 mega units; fever therapy consisted of five to seven paroxysms of malaria (over 104°F. (40°C.)) and 20 hours artificial fever over 105°F. (40-6°C.). Re-treatment was required by 26 per cent. of the penicillin-treated group and by seventeen of the group given combined treatment.

Of the 365 patients, in 58 per cent. the condition was improved, in 20 per cent. arrested, in 15 per cent. worse, and in 7 per cent. unchanged clinically. The "work level" of 38 per cent. was the same, and of 18 per cent. lower; 18 per cent. were not working, and 28 per cent. were in hospital. Social adjustment was good in 31 per cent., fair in 20 per cent., poor in 39 per cent., and unknown in 4 per cent. Of 263 parietic patients, all of manic-depressive or psychoneurotic type, 63 per cent. of the grandiose, 61 per cent. of the simple demented, and only 18 per cent. of the schizophrenic patients were improved.

When the results of the two types of treatment are compared clinically, 69 per cent. of patients treated with penicillin alone were improved, in 15 per cent. the condition was arrested, in 7 per cent. worse, and in
ABSTRACTS

9 per cent. (asymptomatic) unchanged. The corresponding figures for those receiving the combined treatment were 53 per cent., 23 per cent., 18 per cent., and 6 per cent. Results of cerebrospinal-fluid examination were normal or nearly so in 60 per cent. of the group treated with penicillin only, and in 71 per cent. in the group receiving the combined treatment. Results on the whole were superior in those treated with penicillin alone, but this is partly because the more severe cases were selected for combined treatment.

[It is hard to believe that a combination of two methods, each of which is known to be effective, would give worse results than one of them alone.]

T. E. Osmond


The authors review some of the literature on the treatment of cardiovascular syphilis with penicillin, noting the change from the early adverse results to the more favourable reports of recent years, and confirming that complications of penicillin treatment per se are rare. They then describe the results of their treatment of 24 cases of syphilitic aortitis at the Clinique Médicale de la Pitié in Paris since 1947; nineteen of these patients had aortic incompetence, two aneurysms, and three both aneurysm and incompetence, while in fourteen cases there was associated neurosyphilis. Penicillin was administered intramuscularly in aqueous solution in doses varying from 200,000 to 1,000,000 units daily in courses of 10 to 15 days. In many cases repeated courses were given, and in thirteen the treatment was preceded by injections of mercuric cyanide or of bismuth for 1 week. Tolerance was good; in no case was there a true Herxheimer reaction, but three patients had transient fever and one had urticaria.

Only ten patients were followed up for any length of time. Of these, two out of seven with cardiac failure died within 2 years, four had recurrence of failure, and only one remained well after one year. Of three patients without failure, one died of bronchopneumonia, the condition in one continued to develop, and one remained well after 3 years.

The authors were particularly impressed with the marked alleviation of angina, where present, from the beginning of penicillin treatment. They stress the necessity for adequate treatment of any existing cardiac failure before starting anti-syphilitic therapy, and they advise continued treatment with alternate courses of penicillin and of mercuric cyanide and bismuth.

Benjamin Schwartz


After an informative essay on the problems arising in the treatment of cardiovascular syphilis the authors present a summary of the results obtained by the Penicillin-Syphilis Panel of the Hospital of the University of Pennsylvania in the treatment of cardiovascular syphilis with penicillin alone. In common with many other workers, they consider that "penicillin treats the vascular system much more kindly than the arsenicals" and that the dangers of death or even damage as a result of the so-called Herxheimer reaction have been greatly exaggerated. Their experience has also encouraged them "to accept at least the lessened likelihood rather than the outright unlikelihood of therapeutic paradox as a serious by-effect of penicillin, used directly and without preparation, in the treatment of cardiovascular syphilis."  

While recognizing that the conditions of control and follow-up in their series of 111 patients with various forms of cardiovascular syphilis cannot be considered adequate, the authors believe that their results justify the tentative conclusion that a marked advance has been made in the treatment of this phase of syphilis by the introduction of penicillin. Their findings may be summarized as follows:

1. There was little evidence of significant therapeutic shock following doses of crystalline benzyl penicillin totalling 4-8 to 9-6 mega units given without the usual heavy-metal preparation.

2. No certain evidence of any toxic vascular effect or of therapeutic paradox was obtained, even in severely damaged cases in which it might have been expected. Such deaths as occurred were due to other causes.

3. Penicillin treatment was well tolerated by the decompensated heart, and resulted in clinical improvement in a high proportion of cases.

4. Anginal pain was relieved without recognizable shock or paradox in four out of five cases.

5. Of 34 patients with "uncomplicated" syphilitic aortitis observed for 3 months or more, eleven were improved, in seventeen the condition was unchanged, and only in five was it made worse by penicillin treatment.

6. Of 39 patients with aortic regurgitation, 25 were improved, eight unchanged, and six made worse after similar periods of observation.

7. Of five patients with both aneurysm and regurgitation who were kept under observation for 8 months or more, four were improved.

8. As expected, the effect on the serological findings in this series was virtually nil.

The authors recommend treatment in hospital with procaine penicillin (600,000 units daily or 300,000 units twice daily), or crystalline benzyl penicillin in aqueous solution (40,000 to 80,000 units 2-hourly) to a total of 4-8 to 9-6 mega units. They consider that after two such courses further treatment is unnecessary. They also believe as a result of their experience that the concomitant or subsequent use of heavy metal has nothing to commend it.

[This important paper should be read in the original.]

G. L. M. McElligott

Is there a Hereditary Tendency to the Appearance of Allergy to Salvarsan? (Gibt es eine erbliche Disposition für das Auftreten einer Salvarsanallergie?) Kreig, H. J. (1951). Hautartz, 2, 504. 7 refs.


GONORRHOEA (General)


GONORRHOEA (Pathology)


GONORRHOEA (Therapy)


The authors describe the clinical characteristics of gonococcal arthritis and outline the developments which have taken place in its treatment, pointing out that therapeutic results have improved materially since the introduction of antibiotic agents. In discussing diagnosis they suggest that where there is a history of gonorrhoea, or direct or indirect evidence suggestive of gonococcal infection, a definite response to penicillin should be regarded as proof of diagnosis, although there are some exceptions. On the other hand, post-gonococcal rheumatoid arthritis may be identified by the lack of response to penicillin therapy. Recently aureomycin and streptomycin have been successfully used in the treatment of gonococcal urethritis, but it is suggested that these agents should be reserved for the rare case of penicillin-resistant infection.

An analysis is presented of a series of thirty cases of gonococcal arthritis treated at three hospitals in St. Louis, Missouri, between 1943 and 1950, in which 28 of the thirty patients had a definite history of genito-urinary gonorrhoea, and the remaining two were females of "questionable character". A positive urethral or cervical smear and/or culture was obtained in seventeen cases; in eight cases these tests were negative, and in five they were not performed. Of the eight patients with negative local findings six had received sulphonamides or antibiotics before admission to hospital; altogether thirteen patients developed arthritis in spite of previous treatment with sulphonamides or antibiotics or both. The interval between the genito-urinary infection and the development of joint symptoms varied from 2 days to 23 years, and the latter had been present for 2 to 120 days before treatment was started. All but six of the patients had had migratory joint pains at the onset. Only four developed persistent mono-arthritis, the remaining 26 having two or more joints involved. Gonococci were found in the joint fluid in five cases, by direct smear in one case, and by culture in four. The gonococcal complement-fixation reaction was positive in fourteen cases on admission and in another ten subsequently; it was negative in four cases, and was not performed in two cases. This test was also carried out on the synovial fluid in six cases, with positive results in three. X-rays revealed joint destruction in only two cases, in each of which a positive joint culture was obtained. Electrocardiograms were taken in ten cases, but all were within normal limits.

Penicillin was given to each patient in the series in a total dosage which ranged from 0:3 to 28:04 mega units, the average being 5:5 mega units; four patients also received intra-articular penicillin and five received additional therapy, including sulphonamides, artificial fever, aureomycin, and streptomycin. A combination of aureomycin and streptomycin was used in treating one case of penicillin-resistant gonococcal arthritis. In general the results were satisfactory, and only in three cases was there apparent penicillin resistance. The immediate response to penicillin in the remaining 27 was dramatic. All thirty patients were bacteriologically cured at the time of discharge, though eleven of the thirty had some degree of impairment of joint function.

H. S. Laird


CHEMOTHERAPY


In this paper are reported one hundred cases of anorectal complications following the administration of aureomycin, terramycin, or chloramphenicol, alone or in combination. The symptom patterns were almost identical. The patients complained of perianal itching associated with pain and with bleeding upon defaecation. These symptoms developed approximately 2 weeks after the ingestion of the drug. In 41 cases diarrhoea also occurred. Proctological examination usually revealed perianal erythema, with thickening and excoration of perianal skin, and with or without multiple superficial fissures at the anal margins. In a few instances examination also disclosed ulcerative proctitis, ulcerative colitis, or perianal abscess.

The condition was extremely resistant to treatment. Many patients had severe symptoms for as long as 6 to 8 months. Yoghurt or buttermilk appeared to be of benefit in most of the cases in which it was tried.

The author states that the pathogenesis of this anorectal syndrome is as yet undetermined, but that a monilial infection may be responsible.

A. W. H. Foxall


The author, from the Mount Sinai Hospital, New York, refers to previous detailed work (Risman and Boger, J. Allergy, 1950, 21, 425) on benzyl penicillin and penicillins O and BT, in which cross-sensitization was common. He suggests that views as to the usefulness of penicillin O should be modified, as he describes five cases illustrating the occurrence of allergy to penicillin O as a result of sensitization to benzyl penicillin. The present paper is not a precise study of the relation of benzyl penicillin to penicillin-O allergy, but is presented as a warning that penicillin O should not be given in cases of benzyl-penicillin sensitivity.

The report is based on the skin testing of patients with a history of penicillin allergy. A simple technique was used, with 20,000 units penicillin per ml. in distilled water; 0.02 of this was injected intradermally for an immediate reaction, the result being read after 15 minutes. This was often negative, but a positive reaction was more commonly obtained after 24 to 48 hours with the delayed skin test, for which 0.10 ml. was given intradermally. A positive reaction consisted of a definite area of erythema 10 mm. or more in diameter, often with indurative oedema.

The details of the five cases are then discussed, and it is concluded that it is unsafe to assume that penicillin O can be given safely in place of benzyl penicillin and that preliminary skin tests with the various kinds of penicillin should be performed first—a positive reaction being taken as an indication that treatment should be carried out with caution.

The fundamentals of the management of cases of penicillin hypersensitivity are recapitulated:
(1) treatment need not be discontinued for a mild or moderate reaction, and may be continued with symptomatic and anti-allergic remedies (especially in subacute bacterial endocarditis);
(2) there is a high tolerance in cases with a history of a single allergic reaction;
(3) the skin test has a definite if limited sphere of value: a positive reaction is not equivalent to clinical sensitivity, but implies a greater likelihood of this than a negative reaction, and makes a smaller preliminary dose advisable;
(4) if a patient is persistently allergic, then recourse to sulphonamides or the newer antibiotics may be necessary, but desensitization should be seriously considered and those who cannot be desensitized warned against future exposure;
(5) a desensitization technique requires injections of aqueous crystalline penicillin, in ascending doses, 2 to 3 times a week, starting from 50 to 100 units per ml. and increasing to full therapeutic levels.

A conversion from a positive to a negative reaction acts as a useful guide to successful desensitization.

[See the following abstract.] Malcolm Woodbine


In this paper from the Department of Medicine of the State University of New York, the substitution of benzyl penicillin by penicillin O in instances of hypersensitivity reaction is discussed, and a series of miscellaneous penicillin-susceptible infections and the reactions of individuals allergic to benzyl penicillin are described. Oral or intramuscular administration of penicillin O to fourteen normal individuals gave peak serum levels within an hour, and 200,000 to 500,000 units in water by mouth to healthy fasting adults gave peak serum levels of 2-25 to 1-35 units per ml. in 1 hour, with over 0-03 unit per ml. remaining after 5 hours. Higher levels, of 1-40 to 2-85 units per ml., were obtained with intramuscular doses of 50,000 to 100,000 units. The urinary excretion was equivalent to that of benzyl penicillin in three cases, with 33 to 50 per cent. of intramuscular and 10 per cent. of oral doses recovered within 8 hours. In general, the absorption, distribution, and toxic reactions were equivalent to those of benzyl penicillin.

The fourteen cases of miscellaneous infections—which included subacute bacterial endocarditis (±-streptococci), cellulitis of the jaw (Staphylococcus aureus), pneumococcal meningitis, pneumonia and bronchopneumonia, and septic sore throat—responded clinically and bacteriologically in a manner similar to that expected for benzyl penicillin.

Some 25 patients, with or without infections, hypersensitive to benzyl penicillin, were given penicillin O as
a substitute. In 21 of these the reactions to benzyl penicillin had been actually observed, and notes on three cases refer respectively to a serious urticarial rash, a pruritic maculo-papular rash of trunk and limbs, and a generalized pruritic maculo-papular rash. In the majority of patients who had, or developed, a delayed reaction to benzyl penicillin the change to penicillin O was accompanied by a diminution or total disappearance of the allergic phenomena. It was possible to substitute penicillin O for benzyl penicillin with safety in 22 of 25 cases, and to resubstitute benzyl penicillin after 11 to 14 days without a recurrence of the reaction in fourteen out of fifteen patients.

Studies of individuals with less common allergic manifestations to benzyl penicillin suggest that penicillin O is not a total substitute, as cross-immune reactions occur. The successful substitution does not indicate desensitization, but suggests that the induced reaction to benzyl penicillin is temporary. If penicillin therapy cannot be discontinued in a patient with a serious infection and a hypersensitivity reaction, then substitution of penicillin O can be considered a safe and beneficial procedure unless there is a history of contact dermatitis.

Malcolm Woodbine


In the Basle University Dermatological Clinic 53 cases of cutaneous reaction due to penicillin were observed in the course of 4 years. The most frequent manifestation was urticaria (28 cases, in seventeen of which it was generalized, while in two it was accompanied by symptoms of serum sickness). Local applications of penicillin may give rise to conjunctivitis, eczema, glosisitis, and stomatitis, as well as to congestion of the laryngeal and bronchial mucosa. Intramuscular injections may be followed by the appearance of morbilliform or scarlatiniform eruptions which disappear even if treatment is continued, whereas the urticaria is usually aggravated when treatment is continued and is difficult to cure even after stopping treatment. Dermatophytids, papulo-vesicular eruptions on the palm of the hand containing no fungi, may appear in carriers of fungi. Finally, a combination of various manifestations may occasionally be seen to occur.

These reactions occur within 2 to 20 days of the first contact with penicillin, but more often they appear between the 8th and 14th day. They frequently occur in patients who have never before been treated with penicillin and are consequently not due to sensitization by previous treatment. On the other hand, 35 per cent. of the author’s patients were suffering from mycoses and, like the mycoses, reactions due to penicillin mainly occur between May and August. Experimentally, guinea-pigs may be sensitized to penicillin and streptomycin by injection with Trichophyton or injections of trichophytin.

Of 25 patients presenting allergic reactions to penicillin, 90 per cent. showed a reaction to trichophyton and 50 per cent. to penicillin injected intradermally or subcutaneously, while five out of thirty patients with mycoses reacted to intradermal penicillin. Thus a previous or actually existing mycosis, giving rise to antibodies against penicillin, appears to be the explanation of numerous cases of penicillin sensitivity. Possibly the increased incidence of allergic reactions to penicillin observed at the clinic during 1950 may be attributed to the increased incidence of mycoses due to Trichophyton rubrum.

The author suggests that practitioners should avoid using penicillin in the treatment of trifles, and take special precautions in summer, the season of mycoses, and in patients who have previously shown allergic reactions to the antibiotic. A number of cases of eczema due to streptomycin were observed in nurses.

N. Rist (Excerpta Medica)


A new penicillin preparation designated P-92 (a penicillin salt of N-methyl-1 : 2-diphenyl-2-hydroxyethylamine) has been developed, the use of which markedly decreases the incidence of reactions, and also decreases the severity of reaction in those who have suffered reactions with other salts of this antibiotic. The base N-methyl-1 : 2-hydroxyethylamine itself has been shown experimentally to have certain anti-allergic properties which are not related to a true antihistaminic mechanism. The intramuscular administration of 300,000 units of P-92 to twelve patients at the Charity Hospital and Touro Infirmary, New Orleans, resulted in a therapeutic concentration of the antibiotic in the blood serum at all cases after 12 hrs, in seven after 24 hrs, and in four even after 72 hrs. For practical purposes, however, it is recommended that P-92 should not be considered effective longer than 24 hrs following injection, although a more prolonged effect appears to follow the injection of suspensions of P-92 in peanut oil and in peanut oil with aluminium monostearate.

From clinical observations on 312 patients the author concludes that the therapeutic value of P-92 is at least equal to, if not greater than, that of other types of penicillin, especially those of the long-acting type. He recommends injections of P-92 in doses of 300,000 units twice daily. The longest period of treatment in his own series was 53 days: in 175 cases the treatment lasted 3 to 8 days, and in 111 cases 8 to 22 days. Among the patients treated with P-92, 67 had been treated previously with other forms of penicillin and of them gave a positive history of a reaction. Of the 312 patients in the author’s series, nine developed some type of reaction, but in only five could this be directly attributed to the effect of P-92, the other four having received other antibacterial therapy together with the P-92.

J. W. Czekalowski


PUBLIC HEALTH


MISCELLANEOUS


Urethral secretions were collected on sterile swabs and cultured aerobically and anaerobically on meat infusion agar enriched with 20 per cent. horse serum.

Pleuropneumonia-like organisms (PPLO) were grown from eleven of 61 patients with non-gonococcal urethritis, from one of 31 patients with untreated gonorrhoea and from three out of 36 males who had a residual urethritis following the treatment of gonorrhoea with penicillin. PPLO were also found in ten of a group of sixty healthy men in the armed forces who showed no signs of urethritis or other genito-urinary disease. Only one contact was examined, the wife of a man with non-gonococcal urethritis whose culture was positive. An abundant growth of PPLO was obtained from her urethra, cervix and vagina.

The growth of PPLO was abundant in seven cases, all in the non-gonococcal urethritis group; in some instances they were the predominant organism. In the other positive cultures PPLO were only present in small or moderate numbers.

No clinical features were noted suggesting the existence of a clear-cut clinical picture due to infection with PPLO. [The incidence of PPLO in healthy males is higher than reported by other workers.] A. E. Wilkinson


The authors describe three cases of "cat-scratch disease" (acute benign lymphoreticulosus of inoculation) in which the clinical picture closely resembled that of lymphogranuloma venereum. The first two cases occurred, in a woman aged 25 and a man aged 42, on board a ship returning to France from an island in the Indian Ocean. In both the cases a diagnosis of granuloma inguinale was made, and in both cases the patient resented the implication of the diagnosis, which had serious psychological and domestic repercussions. The correct diagnosis was finally made when it was discovered that both patients had been scratched on the legs when playing with the ship’s cats, the onset being about three weeks after the scratch, with malaise, pain in the groin, and later acute inflammation. No suppuration occurred in the case of the woman, who had taken ample sulphonamides on her own account, but the man developed three sinuses in the inguinal region which discharged sterile pus. A third case with inguinal involvement, occurring in a young girl, is briefly mentioned. Suppuration occurred in this case also. In all three cases the Frei intradermal test was negative, but a positive skin reaction was obtained to the specific antigen of cat-scratch disease.

Ferdinand Hillman


Specimens from the urethra, cervix, and vagina of 58 gynaecologically normal women were cultured for pleuropneumonia-like organisms (PPLO) on heart muscle infusion agar enriched with 15 per cent. horse serum. These women had negative histories, and vaginal examination with a speculum and bimanual examination showed no abnormalities.

Of thirteen examined during the second or third month of pregnancy, three had positive cultures; all cultures from a group of thirteen virgins were negative for PPLO; the remaining 32 were married women, and from them five positive cultures were obtained.

Cultures were repeated 2 to 7 times in some individuals and the results were correlated with the stage of the menstrual cycle. Among 27 married women, six of seventeen cultures taken during the first 10 days of the cycle were positive, and 25 cultures taken during the remainder of the cycle were negative. In the group of thirteen virgins whose cultures were all negative, seven cultures were taken during the first 10 days and nine during the remainder of the menstrual cycle.

A. E. Wilkinson


A series of twelve patients with non-gonococcal urethritis (one being complicated by Reiter’s syndrome), two of their wives and one female consort, and one additional male patient with epididymitis complicating cystitis due to Bacterium coli were studied. All were treated with chloramphenicol. Virus inclusion bodies were found before treatment in six cases, and pleuropneumonia-like organisms in five. Virus inclusion bodies were also found in two of the consorts. The pleuropneumonia-like organisms disappeared in all
cases; the inclusion bodies disappeared in some cases. The treatment failed in four cases, and toxic symptoms due to the chloramphenicol were observed in four cases. The results observed in this small series suggest that chloramphenicol is a satisfactory drug to employ in treating inclusion urethritis. No clear conclusions, however, can be said to have emerged so far, either as to the precise relationship of these organisms to non-gonococcal urethritis and to Reiter's disease, or as to an established optimum line of treatment. Investigations are proceeding.

James Kemble


In order to estimate the value of the treatment of *Trichomonas vaginalis* by the local application of aureomycin, a series of 63 non-pregnant and 32 pregnant patients were studied at the University of Tennessee College of Medicine and the John Gaston Hospital. All the patients in the series received the full course of treatment and were observed for at least 3 months after treatment. Diagnosis was established in each case by direct microscopic examination of vaginal secretion.

Treatment was by insufflation of a powder containing 500 mg. aureomycin hydrochloride in 2 g. powdered t alc. Pregnant patients received insufflations on the 1st, 2nd, 3rd, 4th, 6th, and 8th days, and thereafter a 250-mg. capsule of aureomycin was inserted deep in the vagina every night for 2 weeks. Non-pregnant patients received insufflations on the 1st, 2nd, 4th, and 6th days, followed by the insertion of the capsule of aureomycin on alternate nights for 2 weeks.

A vulvar pad was worn by each patient between treatments, and sexual intercourse and douching were avoided if possible. During the use of the capsules douching was limited to twice weekly, a solution containing 60 ml. of acetic acid in 2 l. water being used. It was not possible to examine all contacts, but two husbands whose wives had had recurrences were found to harbour the organism. These were both treated successfully with oral aureomycin.

Patients were asked to report 2 weeks after treatment and monthly thereafter. The arbitrary definition of cure was freedom from symptoms and parasites for at least 3 months, during which period at least four negative examinations were necessary. All patients who were found to have trichomonads were re-treated at once. In the non-pregnant group only three patients failed to meet the criteria laid down, whereas six patients in the pregnant group remained incur ed. However, in this group, in spite of recurrences the relief of symptoms was marked.

No significant toxic reactions to aureomycin were found. Mild discomfort was noted in sixteen out of 95 patients after treatment, but this could not always be attributed to the therapy. Great care was taken in vaginal insufflation during pregnancy to avoid air embolism.

Margaret C. S. Binnie


The authors describe the cases of three men suffering from dysuria and frequency of micturition with much pus and blood in an apparently sterile urine. On dark-ground examination of the urine, however, spirochaetes were seen in all three cases, and in one of them culture was successful, an organism resembling a leptospire being discovered. Injection of neoarsphenamine appeared to give relief, but penicillin, sulphonamides, and streptomycin were similarly associated with recovery.

*We are not informed whether improvement coincided with disappearance of the spirochaetes from the urine.*

G. Loewi


A series of six children with secondary yaws were treated with terramycin orally for 7 days, three receiving 1 g. twice daily, and three receiving 0.75 g. twice daily. All the lesions healed in 1 to 4 days, with an even more rapid disappearance of spirochaetes. No recurrence was apparent during the 3 months after completion of treatment, at the end of which time the Kahn reaction showed a decrease but had not yet become negative. In six cases of tropical ulcer similarly treated, the ulcers became sterile in 72 hrs, with no relapse during the next 3 months. There were no signs of toxicity.

J. L. Markson


Tropical ulcers on the legs of twelve children were treated by the daily application of 3 per cent. aureomycin ointment on lint. Smears of the pus were examined before, and daily after treatment. The ulcers became sterile after 3 to 5 days' treatment, that is, more slowly than with oral therapy, but healing occurred more rapidly. All the ulcers, some of which were 3 to 4 cm. in diameter, were healed completely in 12 to 14 days, and it is suggested that aureomycin assists rapid healing by providing a growth factor in which the devitalized tissues are deficient.

J. L. Markson


A series of eleven cases of non-specific urethritis were treated with aureomycin. Details of four of these cases in which trichomonads were found in wet-mount preparations before treatment are presented. (It is implied, but is not positively stated, that trichomonads were also found in the remainder.) If the urethra only was involved, 750 mg. aureomycin was given orally four times daily for 3 days, followed by 500 mg. four times daily for 4 days. If the prostate or vesicles were involved,
3 g. was given daily for 3 days, followed by 2 g. daily for 7 days.

Observation was maintained, and repeated clinical and prostatic examinations performed, over a period varying from 1 to 10 months after treatment. One failure was noted 3 weeks after treatment, and trichomonads were found in the prostatic secretion of another patient after 6 months. The status of the remaining nine was satisfactory.

R. R. Wilcox


