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 Venerable 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)


The question whether specific treatment of the mother for syphilis can affect bone growth in the infant has never been satisfactorily answered. In this study at the University Skin Clinic, Vienna, 245 infants were examined radiologically during the first month of life for skeletal changes allegedly due to treatment of the mothers, of whom 238 were syphilitic; the seven non-syphilitic mothers and 43 of the others who had not received any specific treatment during pregnancy, and their infants, acted as a control group.

In all, eighty infants showed non-syphilitic skeletal changes consisting of transverse lines in 74 cases and periosteal thickening in six. The treatment of the mothers had been with neaarsphenamine and bismuth (100 cases), or with penicillin (62 cases), or with a combination of all three (33 cases). When the different treatment groups were compared with each other and with the untreated group and their fifty infants no clear relationship between the various groups and the skeletal changes could be established. It is thought, therefore, that other factors than specific treatment are responsible for the changes which have been observed, even in the cases showing the so-called "bismuth lines".

G. W. Csonka


The authors present a review of 201 cases of tabes among Moslem natives as reported in the literature or collected from various North African sources. The symptomatology was very varied, but grave complications, such as arthropathies and optic atrophy were frequently found. The cardiovascular system was affected in eight cases. Young adults were often affected, and a number of patients showed skin lesions. Most of the cases had been untreated or inadequately treated. Alcohol was not shown to have played any significant role in the appearance of the disease. It is pointed out that tabes may appear in persons suffering from chronic malaria. The influence of civilization does not seem to have been important. From the data available, the incidence of tabes, apparently rare among Moslems, cannot be estimated exactly.

James Marshall


The author cites what he considers to be peculiar syphilitic manifestations:

1. recurrent acute conjunctivitis with negative bacteriological findings;
2. trachoma-like pannus;
3. vitreous opacities without uveitis;
4. ocular glandular swelling resembling Mickulicz’s syndrome;
5. orbital gumma resembling a malignant tumour.

M. A. H. Attia


An important and interesting lecture in which Amsler considers torpid and cryptogenic uveitis only. He first describes the exudative manifestations, with a full clinical description of the Tyndall phenomenon, the precipitates on Descemet’s membrane, posterior synechiae, and goniosynechiae. The degenerative manifestations are pigmentary disorders of the iris, iris atrophy, cataract, and macular lesions.

For the author, chronic uveitis is a slow inflammatory process with dystrophy and degeneration; 20 per cent. is of tuberculous origin. The remainder arises from syphilis, rheumatism, and focal infection. Anterior chamber puncture gives an idea of the significance of the exudative process and permits a study of the cells; the albumino-cytological report distinguishes active and quiescent uveitis.

J. Rougier
SYPHILIS (Pathology)


This work, reported from the Rothschild–Hadassah University Hospital, Jerusalem, has shown that colloidal suspensions of alcoholic solutions of lecithin in saline will haemolyse sheep erythrocytes, and that this lysis is inhibited by sera giving positive tests for syphilis but not by negative sera tested at the same dilution. The lytic activity depends both on the concentration of the alcoholic lecithin solution and on the degree of dispersion in saline. Samples of lecithin were found to vary in their activity. The test requires neither complement nor amoebaotor.

The antigen is prepared by dissolving egg lecithin in ether, washing with water, and evaporating the ethereal solution to dryness. The residue is dissolved in 96 per cent. alcohol to give a 3 per cent. solution, 0·9 per cent. of cholesterol being added to increase sensitivity. For use, 1 ml. of antigen is mixed with 0·175 ml. of a 1 in 10 dilution of Rein–Bossak cardiolipin antigen in 96 per cent. alcohol, 1 ml. of this mixture being then added slowly to 21 ml. saline. The serum to be tested is inactivated at 56° C. for 30 min. and the optimum lysis ascertained, that is, the dilution at which a known positive serum completely inhibits lysis, while total lysis occurs with a negative serum in the presence of enough antigen suspension to lyse twice the volume of cells used in the test. [In the protocol showing the optimum dilution the margin of difference between positive and negative sera is very slight; it is not stated whether negative sera show individual variations in their titres.]

In setting up the test 0·4 ml. diluted serum, 0·4 ml. lecithin suspension, and 1·7 ml. saline are mixed and incubated for 30 min. at 37° C.; this is then kept for 19 hrs at 4° C. and then for 1 hr at room temperature, after which 0·5 ml. 2 per cent. sheep erythrocyte suspension is added and the degree of lysis read after incubation at 37° C. for 5 min.

[No results of serum testing with this technique are given in this preliminary report, as it is emphasized that the test "is not yet sufficiently sensitive or specific”; and therefore "not as yet a practical serologic test for syphilis".]


The authors, from the Venereal Disease Research Laboratory, U.S. Public Health Service, report the results of an investigation of the effect of malaria infection on serological tests for syphilis. At the United States Penitentiary, Atlanta, Georgia, 130 volunteers with no previous history of syphils and with negative serum-test reactions, were subjected to bites of mosquitoes infected with Plasmodium vivax. Blood parasite counts were made daily and blood samples for serological testing were taken about 10 days after maximum parasite counts were obtained. Treponemal immobilizing (TP1) tests were performed concurrently with the serum tests. The serological tests made on the 130 samples of serum, were the Kline standard, the Kahn standard, and the V.D.R.L. slide tests, and in addition the Kolmer lipoidal test was performed on 47 samples and the Kolmer cardiolipin antigen test on 49 samples.

False positive findings in titres above the weakly positive or doubtful range were common with the Kahn standard test (94 out of 130) and the Kolmer lipoidal test
(22 out of 47). With the Kline, Kolmer cardiolipin, and V.D.R.L. tests the majority of positive reactions were doubtful or weakly positive. Tests for syphilis using cardiolipin antigens gave fewer false positive reactions than did tests with other antigens. The TPI test in this study showed "poor reducibility" but malarial infection did not seem to have increased the numbers of false positive reactions. G. L. M. McElligott


The authors describe an investigation at the Johns Hopkins University and Hospital, Baltimore, into the incidence and causation of biological false positive reactions to the standard serological tests for syphilis. For this purpose they used the treponemal immobilization (TPI) test.

Of 300 white persons, seen in private practice, who gave positive reactions to standard serum tests for syphilis, 164, or 54-7 per cent., also gave positive reactions to the TPI test, and 136, or 45-3 per cent., were negative reactors and were therefore adjudged as giving false positive results. Of these 136 patients 51 have so far been subjected to a complete medical survey, including laboratory investigation; some significant abnormality other than the false positive serum reaction was discovered in all but six. Proved collagen disease was present in five (disseminated lupus erythematosus, four, rheumatoid arthritis, one), and one patient each had sarcoid, Hodgkin's disease, and Gaucher's disease. In 21 there was historical or clinical evidence which raised strong suspicion that they were suffering from one of the group of collagen diseases (disseminated lupus erythematosus, rheumatoid arthritis, periarteritis nodosa, or rheumatic fever), though in none has the diagnosis yet been fully established; two others were suspected of having sarcoid. The results of the laboratory tests in most of the 23 patients in this group of "suspects" followed a distinctive pattern. The typical abnormalities consisted of raised erythrocyte sedimentation rate and a positive reaction to the cephalin-cholesterol flocculation test, with sometimes weakly positive thymol turbidity reactions, elevated serum globulin level, and occasional proteinuria and cylindruria with normal renal function. "L.E." cells were found in the circulating blood only in cases with characteristic disseminated lupus erythematosus.

It is concluded that the chronic biological false positive phenomenon is far from innocuous, as has hitherto been thought, and is often related to, and may be first evidence of, serious underlying disease. R. R. Wilcox


While in charge of a refugee transit camp in Germany from 1948 to 1950, where for various reasons it was essential to carry out a test for syphilis on a total of some 22,740 persons, the author found that in the circumstances prevailing a very simple test had to be used, although as far as possible reactors were retested by the positive Wassermann reaction when they could be traced. He therefore used a modification of the original Meinicke test (MTR II). In this test a drop of blood is allowed to dry on a slide. When dry it is dissolved in a drop of saline, the resultant solution divided with a loop into two distinct droplets on the same slide, and finally one or two loopfuls of a standard Meinicke extract is added to each of the droplets. The test is read microscopically. The main advantages of this test under the circumstances were that a drop of blood could easily be obtained without raising the suspicion of testing for venereal disease, while a minimum of equipment, time, and personnel was required. Also, the test, though simple, gives a good correlation with the Wassermann reaction.

As mentioned above not all results could be verified by this reaction. However, of 141 strongly positive results 97 per cent. were confirmed as being due to syphilis, of the moderately strong positive reactions 77-4 per cent. were due to syphilis, but only 20 per cent. of 280 weak positive reactions were due to syphilis. The reason for the false-positive reactions is discussed: they may be the result of the presence of other diseases or of previous therapeutic measures, or alternatively due to faults in the technique at or after the taking of the blood. A number of illustrative case histories is given. The author pays special attention to the human and social aspect of venereal disease, and refers to a suggestion by Kruspe that routine tests for syphilis could be carried out in conjunction with mass radiography for tuberculosis. Also, several other modifications of the Meinicke test are discussed and appraised. In conclusion, the simplicity and reliability as a screening test of the reaction described are stressed. Ferdinand Hillman


SYPHILIS (Therapy)


Since 1950 the author, at the Peninsula Maternity Hospital, Cape Town, has treated 169 pregnant syphilitic women with procaine penicillin in an oily suspension with aluminium monostearate (P.A.M.). The dosage schedule was 4-8 mega units of P.A.M., given either in four injections of 1-2 mega units each at intervals of a week, or in eight injections of 0-6 mega units twice weekly. The majority of the women were not treated until the last trimester of pregnancy. A high proportion of the mothers were non-European. Postnatal investigations included a clinical examination and serological tests at the end of the first, second, third, and fourth months of life.

The number of infants born to these 169 mothers was 170, but unfortunately a considerable proportion could not be followed up. Of the 170, eight were stillborn.
or died soon after birth, and in two of these syphilis may have been the cause of death, though the mother of one had not completed the schedule of treatment. In ten infants there was a positive Wassermann reaction at some time or other; four of these were not brought back for re-examination but six were considered to be non-syphilitic on the basis of subsequent negative reactions.

Altogether the efficacy of the antenatal treatment was assessed in 55 of the 170 infants. In 53 the final status was considered to be satisfactory; in two cases treatment failed.

The author considers that the investigation indicates the great value of this method of treatment, but emphasizes the need for a well coordinated plan of treatment and observation, and even suggests that treatment should be enforced in ignorant and uncooperative people.

It is of interest to note that 1·5 per cent. of European and 8 per cent. of non-European pregnant women out of a series of 3,414 gave a positive reaction to the Wassermann test during routine testing.  

Robert Lees


The authors, working at the Midwestern Medical Center, St. Louis, Missouri, report the successful results of topical application of cortisone (drops and/or ointment) in eighteen cases of interstitial keratitis. In the majority of cases subjective symptoms were relieved in 3 or 4 days while signs of active anterior uveitis disappeared in an average of 3 to 4 weeks. There was final visual acuity of 6/9 in 26 out of 29 eyes. Treatment in most cases was continued for an observation period varying between 2 and 16 months. Relapse occurred in three cases when cortisone was discontinued after relatively brief periods of treatment, and in one case after 8 months.

[Although it is stated that the recurrence rate with conservative methods is high (15 to 20 per cent.), 8 months is an exceptionally long period for one attack. This supports Woods's suggestion that cortisone delays or prevents the development of a natural resistance to the disease.]

A. Lister


In previous work (J. invest. Derm., 1949, 12, 111) the authors found that the serum concentration of penicillin following single injections of 1·2 and of 2·4 mega units of procaine benzylpenicillin in oil gelled with 2 per cent. aluminium monostearate remained above 0·03 unit per ml. for 6 to 8 days. In the present paper, from New York University, they specify criteria for a standard preparation, including suspension stability, moisture content, particle size, and diffusion rate in standard cup plate procedure.

The results are reported of the use of this preparation in cases of syphilis, yaws, and pinta, P.A.M. being given either over a period of 2 to 4 days, to a total of 1·2 to 2·4 mega units, or in a single injection of 1·2 or 2·4 mega units. The clinical and serological results of these injections were consistently good. It is considered that with this simple, safe, and practical form of ambulatory treatment it should be possible to control the infectious stage and ultimately to eradicate these diseases.  

V. E. Lloyd


The authors report their results at the Britz Hospital, Berlin, in the treatment with penicillin alone of 479 patients suffering from early syphilis in 1948 and 1949. Of these, 374 were classified as florid cases, ranging from sero-negative primary cases to clinical relapses, and the remaining 105 as latent cases considered to have been infected not more than 4 years previously. The dosage used was between 5 and 12 mega units of aqueous penicillin. Follow-up serological examinations were made at 3, 6, 12, 24, and 36 months, 210 of the patients in the first group being still under observation after 3 years. In 202 (96·2 per cent.) of these the serum reactions were then negative, in six (2·9 per cent.) the reactions showed improvement, and only in two (0·9 per cent.) were they unchanged. Of the 105 patients in the second group, 38 were followed up for 3 years: in 24 (63·2 per cent.) of these the reactions were negative, in eleven (28·9 per cent.) they were improved, and in three (7·9 per cent.) unchanged. These latter figures are considered too small for statistical evaluation.

The authors conclude that treatment with penicillin alone is no less satisfactory than any other anti-syphilitic therapy, although a longer follow-up period will be necessary before any final assessment can be made.

[Some of these patients were given further treatment after the initial course, but the nature of this treatment is not discussed. Results for after-treated patients and those having no after-treatment are recorded separately in the tables, but the original number in each category is not specified.]

Benjamin Schwartz


At the City Health Department, Cape Town, the criteria laid down for the diagnosis of latent syphilis in pregnant women were two positive reactions to the Wassermann test and one positive reaction to the Kahn test. Recently Price's precipitation test has also been used to avoid an occasional biological false positive reaction. The scheme of treatment was as follows:

(a) in new untreated cases four doses of a preparation of penicillin-in-oil with aluminium monostearate (P.A.M.), each of 1·2 mega units, were given at intervals of one week;
(b) in cases already treated before the present pregnancy the weekly injections of 0-6 mega units P.A.M. were given. Absence of clinical signs and a negative reaction to serological tests after a follow-up period of 16 weeks were taken as proof of a non-syphilitic infant.

In the investigation described in the present paper 250 women were treated and 180 were followed up for 16 weeks after delivery. Treatment was given between the 16th and 32nd weeks of pregnancy in 109 cases and after the 32nd week in 65. Altogether 105 women had had no previous treatment for syphilis and so received a total of 4-8 mega units of P.A.M. The results are shown in the following Table:

<table>
<thead>
<tr>
<th>Dose of P.A.M.</th>
<th>No. of Patients</th>
<th>Non-syphilitic Infant</th>
<th>Disaster not due to Syphilis</th>
<th>Syphilitic Infant</th>
<th>Disaster probably due to Syphilis</th>
</tr>
</thead>
<tbody>
<tr>
<td>4-8 mega units</td>
<td>105</td>
<td>93</td>
<td>8</td>
<td>1</td>
<td>3</td>
</tr>
<tr>
<td>2-4 mega units</td>
<td>75</td>
<td>68</td>
<td>7</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>

The author suggests that if treatment is given before the 16th week of pregnancy it may fail to protect the foetus and a second course of treatment should be given later in pregnancy. [This view is not generally accepted; indeed it is usually held that treatment should be given as early in pregnancy as possible. It may be that in the author's 3 cases there was re-infection of the mother from her consort after treatment with P.A.M., for the dose given was adequate.]

Robert Lees


The author discusses the results of the treatment of 697 patients with early syphilis at the Lühe and Langer clinics in Berlin in 1948 and 1949. The patients were in two groups:

(1) 370 were given a course of 3-5 to 6 mega units penicillin followed by a standard course of arsenic and bismuth;

(2) 327 received similar treatment, but supplemented with twelve to fourteen bouts of artificial fever and four injections of calomel.

Between 80 and 90 per cent. of both groups also received after-treatment with arsenic and bismuth outside the clinic. Serological follow-up examinations were made at intervals of 3, 6, 12, 24, and 36 months.

Of the 328 florid symptomatic cases in Group I, 240 were followed up for 2 years, when 92.1 per cent. were sero-negative, and 176 for 3 years, when 97.7 per cent. were sero-negative. Of the 42 early latent cases in this group, 32 were followed up for 2 years, 21 (65-6 per cent.) of which were then sero-negative; after 3 years nineteen cases remained, fourteen (73-7 per cent.) of which were sero-negative.

Of 201 florid cases in Group 2, 153 were followed up for 2 years, when 86.3 per cent. were sero-negative, and 93 cases for 3 years, when 89.3 per cent. were sero-negative. Of the 126 latent cases in this group, ninety were followed up for 2 years, when 53.3 per cent. were sero-negative, and 54 for 3 years, when 59.3 per cent. were sero-negative. The lower percentage of successes in Group 2 is attributed to the fact that there was a higher proportion of secondary relapse and latent cases.

Bearing in mind the fact that only 50 per cent. of the patients treated could be examined after 3 years, the author considers that this combined treatment gave satisfactory results for this period in both frank early cases and early latent cases. Even massive combined treatment, however, does not give success in all cases. He further states that there is no significant difference between his results and the results, as published, of treatment with penicillin only.

Benjamin Schwartz


Iridocyclitis is often present with and may precede syphilitic interstitial keratitis. Treatment with cortisone, either by injection or locally as ointment or subconjunctival injection, shortened the period of disability in such cases.

M. A. H. Attia


ABSTRACTS

GONORRHOEA (General)


GONORRHOEA (Pathology)


An account of the appearances of intracellular inclusions due to this virus as observed by phase-contrast microscopy. Attempts to photograph the virus under the electron microscope were unsuccessful owing to technical difficulties. C. H. Smith

CHEMOTHERAPY


The therapeutic effect of penicillin has been regarded as largely due to the aggregate time it remains at effective levels at the focus of infection, to these levels being of the same order in vivo as in vitro, and the effective time in the serum approximately equal to that in the tissue fluids. Other work, however, has suggested that the bactericidal action of penicillin regularly and significantly persists after it is no longer demonstrable in the blood, either by its persistence in the tissue fluid or by its so affecting the bacteria that they can be disposed of by host defence-processes after the antibiotic has become ineffective.

The authors, working in the Section of Experimental Therapeutics of the U.S. National Institutes of Health, Bethesda, have attempted to resolve these views. They found no evidence of persistence of the drug at effective levels in normal skin, muscle, testis, or peritoneal cavity of mice or rabbits. Direct measurement of bactericidal action in terms of serum concentration was determined by intramuscular inoculation into the hind leg of 20 g. mice with $4 \times 10^4$ organisms of Group A streptococci in 0.15 ml fluid and by giving 2 hrs later 0.15 ml aqueous sodium benzyl penicillin containing doses of 0.05, 0.20, 0.80, 3.2, 12.5, or 50 mg./kg. body weight intramuscularly in the opposite leg. After varying time intervals, groups of eight to twelve mice were killed, the inoculated muscle aseptically emulsified in 50 ml. 1 per cent. blood broth, and the number of viable organisms determined by plate counts. The results were related to the times at which the serum concentration exceeded 0.05 $\mu$g./ml. and fell below 0.02 $\mu$g./ml., these being the maximum and minimum effective serum concentrations. They showed that:

1. the initial rate of kill of organisms was independent of dosage and of magnitude of serum concentration, provided this was above the maximum;
2. the importance of dosage was in relation to duration of bactericidal action;
3. the duration of the period of bacterial recovery varied widely, being brief after small doses but lasting 4 to 6 hours after 3.2 to 50 mg./kg. body weight, and in this period host defences were of little effect;
4. when the organisms had recovered, multiplication was resumed and the mice eventually succumbed to septicemia.

In further experiments the duration of protection given by a single large dose of 60 mg. sodium penicillin per kg. body weight when followed by inoculation with 200 organisms of Group A streptococci or Type III pneumococci intramuscularly, intraperitoneally, or subcutaneously, was determined in mice, and also in rabbits which were given an intratracheal inoculation of Group B haemolytic streptococci (Str. agalactiae). It was then shown that half of these animals succumbed to the challenge inoculum when this was given 1.3, 1.6, or 2.6 hrs after the penicillin, that is, 1.4, 1.1, or 0.1 hrs before the serum penicillin level had fallen to 0.05 $\mu$g./ml.

There was no indication, therefore, in these experiments that penicillin persisted at effective levels in the tissue fluids of normal animals for significantly longer periods than in the serum. Previous anomalous results might be accounted for by the use of repository penicillin preparations. In general, the only advantage of large doses is the longer effective period. The authors consider that host defence-mechanisms do little to enhance the bactericidal action of penicillin and conclude " that in the nonimmune animal the primary determinant of the therapeutic activity of penicillin is the total time for which it remains at the focus of infection in concentrations effective against the particular organism ".

Malcolm Woodbine


The case is reported of a woman of 67, who had suffered from perennial allergic asthma for several years and had been given penicillin on previous occasions without ill effect, who became acutely dyspnoeic and died
shortly after receiving 300,000 units of procaine penicillin intramuscularly for febrile tonsillitis. Two further cases of anaphylactic reaction to penicillin are described, in which the fatal outcome was just avoided. In one of these a mild reaction to penicillin had occurred previously. The dangers of the indiscriminate use of penicillin and the value of detailed inquiry into previous reactions are stressed. H. Herxheimer


Penicillin dissolved in a 10 per cent. solution of "solusupronal" was administered at the Nuremberg General Hospital to 39 patients suffering from a variety of infections, including broncho-pneumonia, lobar pneumonia, cystitis, and cholecystitis, with a good response in all cases. One case responded to the combination after failing to respond to solusupronal and penicillin given separately, and one after terramycin had proved ineffective. A dosage of 200,000 units penicillin and 2 g. solusupronal, given twice daily, was employed in most instances. No toxic effects were noted, and the combination was well tolerated when given intravenously, or intramuscularly with the addition of hyaluronidase. There was no case of thrombophlebitis, although pain along the course of the vein was noted occasionally while the injection was being made. It is pointed out that there appears to be a synergistic action between the drugs which may enable a wider range of infections to be controlled with the combination than with either drug employed alone. Other advantages claimed for the preparation are the lack of the disturbance of the intestinal flora which occurs with the wide-spectrum antibiotics, and its low cost. Robert Hodgkinson
ABSTRACTS

193

1952, 12, 13), was used in an investigation at St. Mary's Hospital, London, of the serum penicillin level after intramuscular injection of the drug. A single intramuscular injection of 1 ml. of an aqueous suspension containing 600,000 units of penicillin was given to nineteen male volunteers whose ages ranged from 19 to 33 years. It was found that benzathacin administered by this route gave a sustained serum level of penicillin which was considerably higher than that obtained with any repository preparation of penicillin yet developed. In a few instances penicillin could be detected in the serum 28 days after a single intramuscular injection. The authors suggest that a summation of dose effect may occur even if the injections are spaced as far apart as 14 days. They point out that in some subjects an assayable level of penicillin was observed only intermittently, a phenomenon which may provide optimum conditions for the emergence of drug-resistant strains; moreover the incidence of sensitization to this preparation is not yet known. Further clinical study will therefore be required before the dangers of drug resistance and sensitization can be fully assessed.

A. W. H. Foxell


A new sulfonamide, "sulphadimetine" (6-p-aminobenzenesulphonamido-2 : 4-dimethylpyrimidine), has been tried at the Beth Israel Hospital, Boston, in a number of cases of infection of the urinary tract, mostly due to Gram-negative bacilli. This drug, it is claimed, possesses certain advantages over the older sulfonamides since it is the least acetylated of the sulfapyridine derivatives, it is very soluble in urine within the range pH 5-5 to pH 8, it is free of toxicity, and has been shown in experimental animals to be of high therapeutic potency. In all, 40 patients with acute and chronic urinary infections were treated, the majority (24) being cases of postoperative cystitis. Pyuria was present in all cases, and the causative organisms found were Bacterium coli (22 cases), Pseudomonas aeruginosa (15), Proteus vulgaris (11), Staphylococcus aureus or albus (8), Aerobacter aerogenes (5), paracolon bacilli (3), streptococci (2), and diphtheroids (1). More than one organism was present in twenty cases. Urine specimens for culture were obtained by catheterization from all female patients and most of the men. In 29 cases the patient had received previous ineffective treatment with antibiotics.

An initial dose of 2 g. sulphadimetine was administered, followed by 4 g. daily in divided doses. No alkali was given and no attempt made to maintain a minimum daily fluid intake. Treatment was continued for 4 to 8 days, or up to a maximum of 15 days if the bacilluria persisted. In no case were toxic reactions or evidence of renal damage observed, and a blood level of 6 to 12 mg. free sulfonamide per 100 ml. was easily maintained on the above dosage.

The results were encouraging, 24 patients being cured of the infection and three greatly improved. Of fifteen patients previously treated unsuccessfully with aureomycin, ten responded to the new drug, while of the 24 strains of bacteria isolated, sixteen were cleared. In thirteen cases the initial response was good, but within a short while the flora became resistant. The results in cases of mixed infection were, as was to be expected, less satisfactory than in those where a single organism was responsible. This new sulfonamide seems to be particularly effective against Bact. coli, A. aerogenes, and the staphylococci; Proteus vulgaris and Ps. aeruginosa, however, still remain the bugbears of urinary infection.

S. M. Vassallo


OTHER VENEREAL DISEASE CONDITIONS


Donovania granulomatosis was the name given in 1945 by Anderson and others (J. exp. Med., 1945, 81, 25) to a bacterium isolated from cases of granuloma inguinale. The organism grew only in a medium containing fertile chicken egg-yolk material, and serum from patients with granuloma inguinale contained antibodies against the organism. In this paper the authors, working in the Department of Bacteriology, University of Kentucky, report additional observations on the bacteriology of D. granulomatosis, and describe their experiments and results in detail.

Four strains of the organism obtained from different laboratories were examined. Morphologically these were found to be very similar, being described as non-motile, pleomorphic, Gram-negative rods about 0·6 x 2·0μ in size and usually containing granules, which were frequently bipolar. None of the strains was able to
grow on any medium which did not contain egg yolk or some product derived from it. From the outset it was observed that different batches of egg yolk varied in their ability to support growth. Egg yolk from chickens allowed to forage a natural diet for themselves apparently contains a factor which is necessary for the growth of Donovania. This factor was absent from the egg yolk of chickens whose diet was regulated in any way. Experiments to determine the nature of this factor showed it to be thermalabile, non-filterable, and capable of being inactivated by diethyl ether, acetone, and ethylene oxide. These latter agents could therefore not be used to sterilize a medium designed to grow D. granulomatis.

Further experiments showed the growth-promoting factor to be directly associated with the yolk and not a product of embryonic development, since non-fertile chicken, duck, goose, and turkey eggs yielded the factor. In replacement experiments none of the following substances was able to replace the growth factor: haemoglobin, thiamin hydrochloride, tryptophane, cystine, asparagine, biotin, pimelic acid, uracil, adenine, guanine, xanthine, pantothenic acid, rabbit liver extract, yeast extract, and gastric mucin.  

Benjamin Schwartz


After a brief review of the literature relating to the complement-fixation test in granuloma inguinale, the authors report the results of their examination at the University of Kentucky of 151 samples of serum from verified cases of the disease, in which Donovan bodies had been demonstrated, and of 112 control sera from 55 patients with other venereal diseases, eight patients with non-venereal diseases, forty healthy patients, and nine patients with lesions resembling granuloma inguinale but in whom *D. granulomatis* could not be demonstrated. All sera were from Negroes, since granuloma inguinale affects this race almost exclusively. The antigens used were prepared from bacterial cells of the Anderson and the Georgia strains and culture filtrates from the Anderson strain of organism only; thus each serum was subjected to three tests. Freezing, apparently, had no effect on the antibody titre of sera.

The results of the various experiments performed are tabulated, and show that of the 151 sera from patients with granuloma inguinale 136 gave a positive reaction with one or more antigens. The Georgia bacterial antigen was most sensitive, yielding 128 positives, and the Anderson filtrate antigen least sensitive, yielding only 84 positive reactions. All the control sera gave negative results, except one sample from a case clinically resembling granuloma inguinale. A Table comparing the results of the tests with the duration of the lesion in positive cases shows that all but one of the sera from patients with granuloma inguinale of a duration of 3 months or more gave a positive test with one or more antigens. The titres of sera increased with the duration of the lesion.

The authors conclude that the results confirm the close association between *Donovania granulomatis* and granuloma inguinale, and suggest that the complement-fixation reaction appears to be a useful diagnostic test.  

Benjamin Schwartz


Material for this work was obtained from the literature and from personal experience in 77 patients of the Military Hospital of Mexico City. The following conclusions were reached:

1) Disorders of the eye due to lymphogranuloma take place in the anterior segment, or fundus, or in both simultaneously. Some are due to direct inoculation of the virus in the eye, while others, being metastatic, have an extra-ocular location.

2) Ocular manifestations may be varied and may be related to:

(a) the varying degree of virulence of the germ;
(b) the zone of primary inoculation;
(c) the specific receptivity of the patient;
(d) the evolutionary stage of the disease;
(e) coexisting diseases;
(f) modifications imposed by the therapeutic procedures used.

When the different ocular alterations found in the group of 77 patients with lymphogranuloma were tested to find out their statistical significance, the coincidental nature of most of them was evident. The statistical comparative study between the total of ophthalmological ailments discovered in these groups of patients and the total of the analogous ophthalmological ailments investigated in one hundred individuals without the disease, suggests that some of the ailments may be related to lymphogranuloma. (Author's summary)


ABSTRACTS


PUBLIC HEALTH


Spread of Venereal Diseases under the Influence of Spontaneous Factors and Planning Measures. (Kretanje veneričnih bolesti pod utjecajem spontanih faktora i planskih mjera.) Ginsberger, O. (1953). Higijena, 5, 47. 33 refs.


MISCELLANEOUS


This study of the use of antibiotics in the treatment of lymphogranuloma inguinale was made at the Medical College of Georgia during 1946–51. Streptomycin was given intramuscularly in varied doses in order to establish an optimal therapeutic regimen; this was found to be 4.0 g. daily for 5 days. Of 142 patients treated with streptomycin, of whom 115 were followed-up, only fourteen required re-treatment but eight of these proved to be streptomycin-resistant. Eighth nerve involvement was not encountered although several patients had pruritus with or without urticaria.

Aureomycin was given to 71 patients. The optimum oral dose was found to be 2 g. daily for 10 to 20 days, although a more prolonged regimen was found necessary in patients with extensive lesions. Of the 66 patients followed up, eleven required re-treatment; there were no cases of resistance to the drug. Toxic effects were few and mild and consisted of nausea, vomiting, and pruritus of the anus and vulva. Chloramphenicol was used in the treatment of 46 patients and 2 g. daily for 10 to 20 days, or longer in extensive cases, was likewise found to be the optimum course; 42 patients were followed up and ten required re-treatment; one case of resistance was noted. A few patients suffered from mild nausea or dermatitis.

The same optimum dosage was found in respect of terramycin which was used for 36 patients, of whom 27 were followed up for periods up to one year; two patients have so far required re-treatment and there have been no failures. Mild nausea and headache were noted in two patients but in none did the treatment have to be discontinued. Although oral therapy can be given to outpatients, treatment in hospital under supervision is considered desirable.

R. W. Willcox


The Ito, Reenstiere, or “dmelcos” reaction for the diagnosis of chancroid consists in the intradermal injection of a vaccine of Ducrey’s bacillus, a positive reaction being demonstrable as a palpable button at 48 hours. The test is of little value in the diagnosis of the individual case in districts where the disease is rife, as 8 to 24 days must elapse after the appearance of the sore before a positive reaction can be obtained and once the patient has become sensitive to the vaccine he may remain so for life. It is also suggested that the sensitive skin of an infant may give a false positive reaction and that the infant may inherit specific sensitivity from the mother. The main value of the test seems to be as a rough guide to the general incidence of the disease.

The test was performed on 1,022 African Negroes, 990 in Southern Rhodesia and 32 in the Gold Coast, about 50 per cent. being patients in venereal disease clinics. The results indicate that the incidence of chancroid amongst Africans is high, and that, like other venereal diseases, it is more prevalent in the towns, especially among the female prostitute population.

Neville Mascall


Cat-scratch disease, which seems hitherto to have attracted most attention in France, is a regional lymphadenitis, with or without sterile suppuration, following a lesion of the skin, typically the scratch of a cat. The initial lesion may assume various forms and is absent in about half the cases. Lymphadenitis may be widespread, though the cervical and axillary nodes are those most usually affected.

The present authors, who report sixty cases of the disease, state that it is widespread in the U.S.A., but often unrecognized. It may be mistaken for a number of inflammatory or even neoplastic conditions. Initial fever with systemic symptoms may or may not occur, but in most cases the lymphadenitis pursues an indolent course. Diagnosis can be confirmed by a specific intradermal test with antigen prepared from the pus obtained from a suppurating lymph node. The appearance of the lymph node on microscopical examination is regarded as characteristic, but not diagnostic. Suppuration occurred in about one-third of the authors’ cases, and in one the epitelochlear node of a girl aged 5 was much enlarged.
The virus which causes the disease may be carried on the claws of healthy cats, and may be related to the lymphogranuloma—psittacosis group of viruses, but this is not yet confirmed. 

Joseph Ellison


The numerous references in the literature [from as far back as 1895] to the controversial question of the relationship between granuloma inguinale and cancer led the authors to re-examine the problem. At the University of Pennsylvania the epithelial changes in 150 specimens from 105 proved cases of granuloma inguinale were studied. It was found that the histological appearance varied from that of normal epithelium to that of a high-grade pseudo-epitheliomatous hyperplasia. In the authors' view changes in the corium may help in differentiating granuloma inguinale from cancer; in many cases the two conditions co-existed.

[The histopathologist would do well to study the original paper and the Table of differential diagnostic criteria.] Douglas J. Campbell


From a study of their own series of nearly one hundred cases of cat-scratch disease (benign lymphoreticulitis of inoculation), observed in the various clinical departments of the University of Zürich, and of others reported in the literature, the authors have been able to distinguish several atypical forms of the disease. In the typical case there is a history of a trivial skin injury (often caused by a cat or other animal), developing into a small sore; this usually heals, but is followed after an interval by enlargement of the regional lymph nodes and the development of sensitivity to the specific antigen injected intradermally; alternatively, the lymph-node enlargement may be minimal and the primary skin lesion persist as an intractable ulcer (often thought to be syphilitic or tuberculous), while many cases occur which are intermediate between these two extremes.

Among the atypical forms of the disease are these:

1. pseudo-venereal, presenting as an unexplained inguinal adenitis;
2. resembling erythema nodosum;
3. anginose, with pharyngeal abscess formation;
4. mesenteric, possibly simulating appendicitis;
5. pulmonary, possibly simulating tuberculosis;
6. ocular, affecting the eyelids and conjunctiva;
7. meningo-encephalitic, with a lymphocytic meningeal reaction.

In all these forms the diagnosis rests on the clinical picture, histology, and the skin-test reaction, none of which is absolutely specific in itself. Stephen G. Gang


The analgesic action of antihistamine drugs has been demonstrated in experimental animals, and the use of one of these drugs as an analgesic before performing gastroscopy was reported by Moseley in 1948 (Amer. J. digest. Dis., 1948, 15, 410; Abstracts of World Medicine, 1949, 6, 269).

In the present investigation tripelelenamine hydrochloride was used as a urethral analgesic on one hundred patients. On the first fifty occasions a 4 per cent. solution was injected into the urethra, followed after 5 minutes by the passage of a bougie coated with tripelelenamine ointment. Owing to the high incidence of a burning sensation in the urethra after instillation of the 4 per cent. solution, a 2 per cent. solution was used for the second fifty patients; only three of these patients complained of burning sensation of an unpleasant degree. Analgesia was uniformly good, and was also acceptable to the patients, who had all had previous experience of urethral manipulation after the use of local anaesthetics. In four cases the patients felt light-headed after cystoscopic examination, but this, the authors state, may have been unconnected with the use of tripelelenamine. The drug can also be used in the form of 20-mg pellets which are inserted in the posterior urethra before cystoscopy, and are especially useful in the presence of active bleeding.

It is suggested that tripelelenamine and other antihistamine drugs may be useful urethral anaesthetics in patients who show an idiosyncrasy to more commonly used local anaesthetics. Victor W. Dix
