ABSTRACTS

This section of the JOURNAL is published in collaboration with the three abstracting Journals, ABSTRACTS OF WORLD MEDICINE, ABSTRACTS OF WORLD SURGERY, OBSTETRICS, AND GYNAECOLOGY, 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)


Irregular or insufficient treatment of sero-negative primary syphilis predisposes the patient to neurosyphilis and to the precocious appearance of this complication. Early syphilis is better untreated than badly treated. This conclusion is supported by the observation that unrecognized and untreated syphilis often runs a benign course. This is probably due to the development of immunity as a result of secondary or tertiary skin lesions. The immunizing action of the skin is proportionate to the extent of the lesions. The benign evolution of syphilis in cases with widespread skin lesions (specific or non-specific) seems to imply that immunity is developed in the skin.

James Marshall


13, 53. 2 figs, 48 refs.


**SYPhilIS** (Pathology)


Variations in the density of the treponemal suspension between $8 \times 10^4$ and $150 \times 10^4$ organisms per ml. were without effect on the degree of immobilization. The rate of immobilization was found to vary with the concentration of antibody, but even with the highest concentration of serum used, there was a lag period of two hours before immobilization began. With low concentrations of complement this initial lag period was increased. When treponemata were presensitized by exposing them to the action of serum containing immobilizing antibody for 16 hours before the addition of complement, the lag period was diminished, and even low concentrations of complement were found to produce significant immobilization.

The titre of immobilizing antibody can be determined by finding the serum dilution which will immobilize 50 per cent. of the treponemata after incubation at $35^\circ C$ for 18 hours. S-shaped curves are obtained by plotting the serum dilution against the per cent. immobilization and the 50 per cent. end point found by interpolation. The same serum was examined on thirteen occasions over a period of 7 months; the results agreed to within $\pm$ 25 per cent. The cause of false positive and negative results is discussed.

[This important paper describes modifications of the test and contains much technical detail which cannot be dealt with in an abstract. The original paper should be consulted by those interested.]

A.E. Wilkinson


Four strains of *T. pallidum*, two of *T. pertenue* and one of *T. cuniculi* were used in this investigation. Antisera were produced by the intra-testicular inoculation of rabbits, and the immobilizing titre (the dilution of serum immobilizing 50 per cent. of treponemata after 18 hrs. incubation at $35^\circ C$ in the presence of 10 per cent. complement) was determined against the homologous and other strains.

A high degree of cross reaction was found between the two strains of *T. pertenue* and *T. pallidum* (Nichols strain). There appears to be a definite antigenic difference between *T. cuniculi* and *T. pallidum* and *T. pertenue*. Antisera against *T. cuniculi* showed significantly lower immobilizing titres against *T. pallidum* and *T. pertenue* than against the homologous strain.

In similar experiments with the four strains of *T. pallidum*, three strains showed a high degree of cross...
reaction. Antisera against the fourth strain, despite having a high immobilizing titre against the homologous organism, showed significantly lower titres against the other three strains; this suggests that there may be antigenic differences between strains of *T. pallidum*.

The sera of rabbits immunized with the Reiter, Kazan, and S-26 strains of non-virulent spirochaetes showed no immobilizing power against *T. pallidum, T. pertenue*, or *T. cuniculi*, although agglutinins against the infecting organisms were present to a high titre.

A. E. Wilkinson

Mazzini Cardiolipin Microflocculation Test for Syphilis.


In this test the disadvantage of the slow "ripening" of the Mazzini lipoidal antigen emulsion has been overcome by using a variant which allows the emulsion to reach optimal sensitivity immediately after its preparation. This renders the test usable in emergencies and adaptable to a particular serological routine. An improved technique of preparing the emulsion and performing the test is detailed, whereby the cardiolipinlecithin antigen becomes more efficient in both sensitivity and specificity.

The tendency of the antigen to produce a disproportionate number of zonal reactions with strongly positive sera has been overcome by decreasing the quantity of serum, adding saline after the primary rotation, and recentrifuging at a slower speed for an additional 4 minutes. Both specificity and sensitivity are increased, but false positive reactions continue to occur in many diseases other than syphilis. The test is applicable to spinal fluids, requires a very small amount of serum, and seems to be as sensitive and reliable as the complement-fixation test.

T. Anwyl-Davies

The Effects of Sex, Castration, and Testosterone upon the Susceptibility of Rabbits to Experimental Syphilis.


The authors took 46 adult male and 38 female rabbits; 22 of the former were normal and 24 castrated; 27 of the latter were normal and eleven spayed; each group was divided into three, one receiving no testosterone, one receiving 0.3 mg. per kg. body weight daily to a total of 13-2 mg. per kg., and the third 1 mg. per kg. daily to a total of 83 mg. per kg. Emulsions of *Treponema pallidum* ranging from 10 to 10⁶ organisms were inoculated into six sites over the backs of the animals.

Results showed that the incubation period is shorter in male than in females, but the latter develop more lesions with the same inocula; castration in both sexes prolongs the incubation period and increases the resistance to infection; the shorter incubation period in the male is presumably due to more rapid division of the treponemata or to increase in the local reaction. Testosterone in increasing doses shortens the incubation period and increases the susceptibility in the male; in the castrated female large doses prolong the incubation period and increase resistance to infection. These paradoxical results suggest that testosterone interacts with sex factors, probably hormonal in nature.

T. E. Osmond


SYPHILIS (Therapy)


Five cases of syphilitic eye disease were treated with cortisone administered three-hourly as drops. Two were primarily iridocyclitis and three primarily interstitial keratitis, congenital or acquired. In all cases rapid reduction of the inflammatory signs was noted in periods varying from 11 to 28 days. In one, relapses continued to occur when treatment was discontinued, and in another, in which treatment was perforce incomplete, some signs of disease activity remained. Relief of pain and photophobia and improvement of vision are described as dramatic in all cases.

H. E. Hobbs


Syphilitic diseases of the eye usually respond well to any specific treatment, but parenchymatous keratitis and congenital syphilis are exceptions. However, it is necessary to carry out specific treatment to eliminate the causative organism and to avoid any further damage. Specific treatment carried out carefully may fail to protect the healthy eye even though the Wasserman reaction becomes negative. The duration of specific treatment depends upon whether the patient has been seen in the progressive or in the regressive stage. Parenchymatous keratitis often subsides even without specific treatment. Non-specific treatment (injections of iodide, subconjunctival injections of sodium chloride or mercury preparations, x rays, milk injections, iontophoresis, malaria infection, tuberculin treatment, local application of specific drugs) has been tried but without result.

The author divides his treatment into two parts: (1) specific treatment by intra-conveal and sub-conjunctival injections of penicillin and general specific treatment which acts only if the keratitis has been caused by the spirochaete. The toxins may not be neutralized at the same time. The toxins can be formed locally in the cornea or can reach the cornea through the bloodstream; (2) non-specific treatment having as its object the quickest possible reduction of the oedema. This was obtained by massive peribulbar, sub-conjunctival hypertonic dextrose injections, by intracorneal dextrose injections, by drying up the corneal surface with radiant heat, and bathing in hot water. The results are seen in 1 to 2 weeks. The more difficult treatment of the deep corneal opacities is done by punctures of the anterior chamber, by trephining (paracentral) reaching to Descemet’s membrane. The process is usually arrested in 3 to 4 weeks. Clearing of the central and deep opacities takes longer and is usually very slow. The author could not obtain an acceleration of the process of regeneration. He is confident that blindness through corneal diseases can be avoided if parenchymatous keratitis and congenital syphilis are tackled in time.

L. Weissselberger


Penicillin levels in the cerebrospinal fluid were determined on 198 specimens taken from 114 patients, seventy of whom had normal spinal fluids. Estimations were made at various intervals after a course of 600,000 units of procaine penicillin with 2 per cent. aluminium monostearate given every 24 hours for six doses. Serum levels as high as 0.6 unit per ml. were demonstrated after the last injection. Detectable levels of penicillin in the cerebrospinal fluid were obtained from 2 to 250 hours after the beginning of the injections, 82 per cent. of the specimens showing a level at 31 hours, and 91 per cent. at 122 hours.

From 22 patients given single injections of only 300,000 units, four of the specimens showed a measurable amount of penicillin in the cerebrospinal fluid and eight showed a trace.

R. R. Willcox


The authors treated seventeen patients suffering from established cardiovascular syphilis with 4,008,000 units of aqueous benzyl penicillin. A gradually increasing dosage scheme was employed commencing with eight 3-hourly injections of 1,000 units on the first day of treatment and rising to 40,000 on the eighth and subsequent days. Of the seventeen patients, five died after 2, 270, 350, 527, and 854 days respectively. No Herxheimer reactions were encountered, but orthodiagnostic study revealed a subsequent worsening of cardiac damage in seven patients, improvement in three, no change in five, and equivocal results in two.

The authors found orthodiagnostic control to be more sensitive than that of radiography or electrocardiography. Adjuvant treatment with heavy metals was not given.

[It is regrettable that no account is given of the necropsy findings, if any, in the patients who died.]

G. L. M. McElligott


This is a study of 67 patients with dark-field-positive early syphilis who were treated with 70 g. aureomycin by mouth in 11 days. At the end of 6 to 7 months all the three primary sero-negative patients were clinically and serologically normal, as were also the two primary sero-positive ones. Of the 62 secondary cases, 37 became sero-negative, thirteen had a weakly positive reaction of 3 Kahn units or less, and ten one of 4 Kahn

Though excellent results in the treatment of neurosyphilis with penicillin alone have been reported by many workers, the authors are persisting in the study of the fever-with-penicillin method of therapy, believing that the ultimate efficacy of any treatment cannot be ascertained until after many years of study: 81 patients with various forms of neurosyphilis were treated with approximately twenty daily injections of 300,000 units of procaine penicillin in oil with aluminium monostearate (P.A.M.). Four or five episodes of fever, induced by the blanket method, with temperatures of 104° to 105° F. (40° to 40.6° C.) were given during the treatment period. In the majority of symptomatic patients the clinical response was satisfactory, except, as was to be expected, in tabes dorsalis. Four patients with moderate or mild degrees of primary optic atrophy improved after treatment, though other severe cases were unaffected. The cell count, protein content, and colloidal gold reaction of the spinal fluid tended to revert to normal within one year, but the Wassermann reaction in both blood and spinal fluid usually remained positive. The authors agree that their results cannot be accurately compared with those of penicillin alone in the treatment of neurosyphilis.

G. L. M. McCullough


A group of 220 children with syphilis were treated with penicillin and observed over a period of up to 4 years: 130 were infants with congenital infection; one-third of the cases were not seen until the disease had been present for 1 to 3 months. The dose was 300,000 to 500,000 units per kg. daily in six doses given intramuscularly, latterly changed to three doses given subcutaneously in 0.5 per cent. procaine; the course of treatment lasted for 12 to 15 days and was repeated after 3 to 4 weeks. Small doses (5,000 units) were given at first in order to avoid Herxheimer reactions, and the dose was increased later to 20,000 units. Skin lesions regressed in 3 to 10 days, and rhinitis disappeared in a quarter of the cases at the end of one course; destructive bone lesions healed after 1 to 2 months, and periostitis after 2 to 4 months. Enlargement of the liver and spleen responded less rapidly and often progressed during the course of treatment, but nephritis improved rapidly and the urine was often normal at the end of the first course. The general condition of the infants improved, anaemia disappeared, and they put on weight. Of 135 children, 76 of whom were infants with congenital syphilis, fifteen died (thirteen infants), ten of them during the first course, while six died out of 93 children (including 75 infants) treated subsequently with larger doses. The Wassermann reaction usually became negative 2 to 4 months after beginning treatment, but remained positive in some cases until combined therapy was given. Arsenical compounds were given at a later stage in view of the possibility of relapse after treatment with penicillin alone.

The authors also gave penicillin treatment to forty patients between the ages of 6 and 17 years suffering from acquired syphilis. Smaller doses were given in this group: 100,000 to 150,000 units were given per kg., with a total of 2 to 3·5 million in a course. Good results were obtained; there was complete restoration of vision in five of seven cases of keratitis, involvement of the central nervous system was arrested in other cases, and the Wassermann reaction became negative in ten of sixteen patients. Relapses may occur later if treatment with the usual preparations is not given as well.

D. J. Bauer
ABSTRACTS


GONORRHOEA (General)


A vehement plea is made that silver nitrate prophylaxis should be completely eliminated, and that penicillin therapy should be given instead to all mothers suspected of having gonorrhea at the time of delivery.

The principal arguments are that damage follows the erroneous use of concentrated solutions—this applies to most drugs—and that penicillin is agreed to be the better therapeutic agent. [Surveys in favour of this view are given but important surveys, such as that of the report of the investigating committee of the American Academy of Ophthalmologists, approved by the Section of Ophthalmology of the American Medical Association, with an opposite conclusion are not mentioned. It could be added that the majority of cases of gonococcal ophthalmia are derived from mothers in whom the disease has not previously been suspected, and that, where the disease is known to exist, specific treatment is normally given in any event as well as the routine prophylactic drops to the infant.]

P. D. Trevor-Roper


A comparison is made between silver nitrate and aureomycin in giving prophylaxis against ophthalmia
Neonatorum; 442 infants were given silver nitrate prophylaxis and 1,000 were given aureomycin. Two drops of aureomycin were instilled into each conjunctival sac immediately after birth.

The silver nitrate caused an immediate reaction with discharge, redness, and swelling in 20 per cent. of infants but the immediate reaction can be reduced by irrigating soon after the instillation. There was no unfavourable immediate reaction after aureomycin prophylaxis. No case of gonococcal ophthalmia occurred in either series. The sporadic occurrence of bacterial infection during the first few days of life was about equal in each series. 


A single dose of 50,000 units of crystalline penicillin intramuscularly appears to be as effective as the Credé method. The authors applied the two methods alternately in a series of 5,919 births.

S. J. H. Miller


**GONORRHOEA (Pathology)**


A review is given of the literature together with personal observations on the problem of secondary infections with gonorrhoea and certain forms of non-gonococcal urethritis. Chlamydozoan O.G. is considered a more important causal factor than “L” organisms. Aureomycin appears to be the most useful antibiotic for such infections. James Marshall

**GONORRHOEA (Therapy)**


The author treated 69 females suffering from gonorrhoea with single oral doses of terramycin. Patients were kept in hospital for 2 weeks and regarded as cured if four negative post-treatment smears and cultures were obtained during this time. Only six of twelve patients were cured when given 0.5 g, but of 55 given 1 g, 45 (82 per cent.) were considered cured. It is concluded that terramycin is an effective drug in the treatment of gonorrhoea, although in the doses given the results were slightly inferior to those obtained with single injections of either penicillin or streptomycin. "It seems that terramycin will not supersede parenteral penicillin in the treatment of gonorrhoea, but it can compete with penicillin in those cases in which oral treatment is preferable."

[These results are considerably better than those obtained by the abstracter with single doses. They can be improved by giving two doses each of 1 g. at an interval of 6 hours.] R. R. Willcox


**MISCELLANEOUS**


An account of a group of viruses lying midway between the typical large viruses and the rickettsia, for which the family name *Chlamydozoaceae* has been suggested.

They differ from the typical large viruses in: (1) ease of staining of the initial and elementary bodies; (2) basophilic character of the bodies; (3) character of the inclusion matrix; (4) sequence of the morphological variation; (5) susceptibility to chemotherapy.

The family may be divided into those that have a special affinity for the reticulo-endothelial system—genus *Miyyagananella*, including the agents responsible for lymphogranuloma venerum and psittacosis—, and those mainly affecting the eye—genus *Chlamydozoa*, including trachoma and inclusion conjunctivitis. A third group, the *Colesiota* which are responsible for specific ophthalmitis in sheep, cattle, hogs, and goats, were, at first, classified as rickettsia but the absence of an arthropod vector seems to indicate that they too should be included in the *Chlamydozoaceae*.

Although the essential difference between the first two groups is their tissue affinity, lymphogranuloma venerum has ocular complications in a significant number of cases. Episcleritis, follicular conjunctivitis, uveitis, keratitis, and especially Parinaud’s syndrome, have all been reported.

The individual members of the group are then reviewed, but for the details of these the reader must be referred to the original paper. E. C. Glover

A 29-year-old European had suffered for 9 years, two or three times a year, from attacks of urethritis associated with a sore mouth and chest complaints, a rash on the skin, and sore eyes. He had been treated at V.D. clinics, but gonococci had never been found. The author describes such an attack which he personally observed: temp. 100° C; thick yellow urethral discharge with erosions on the glans penis and ulcers in the preputial sac; no gonococci; productive cough with muco-purulent sputum; signs of bronchitis but no consolidation of the lungs; inflammation of the bulbar conjunctiva with oedema of the upper lid and a superficial conjunctival ulcer; no purulent discharge from the conjunctiva; Wassermann reaction negative. Ten days after the onset of the urethritis a patchy erythematous rash developed on the forearms and on the legs between knees and ankles. The centre of each patch became vesicular. Treatment with penicillin (500,000 units of procaine-penicillin daily) seemed to have a good effect and led to the disappearance of all symptoms. Five months later another attack was observed which ran exactly the same course.

The author regards this as a case of Stevens-Johnson syndrome showing, however, some unusual features.

A. Jokl


The author, working at the Royal Infirmary, Edinburgh, describes the side-effects observed in seventy patients receiving 2 g. chloramphenicol daily (average total 32 g.) and 56 patients receiving 2 g. aureomycin daily (average total 28 g.). General reactions, such as drowsiness, malaise, or skin rashes, were rare. Oral manifestations occurred in over 50 per cent. of cases and were commoner in young women, developing more rapidly in cases previously treated with penicillin and streptomycin. An atrophic glossitis was frequently seen; hypertrophic glossitis with brown discoloration of the tongue was less common. Scrapings from the tongue revealed the replacement of the usual bacterial flora by fungi, usually Candida albicans. Dryness of the mouth with sore throat, interference with taste, redness of the mouth with blisters and angular stomatitis similar in appearance to vitamin-B deficiency were also seen and responded to vitamin-B complex therapy. Gastro-intestinal symptoms, such as flatulence, nausea, and diarrhoea, were commoner with aureomycin, as also were rectal and genital changes.

I. Ansell


By the suppression of bacterial growth the administration of antibiotics may have an enhancing effect on the growth of fungi. The authors describe 25 cases of moniliasis occurring apparently as a direct sequel to antibiotic therapy, in which the presence of *Candida* (Monilia) albicans was confirmed in all cases by culture. The cases fall into three groups.

Group 1. Regardless of the route of administration, penicillin, aureomycin, and chloramphenicol might lead to oropharyngeal and oesophageal moniliasis. It usually appeared 24 to 72 hours after the condition which was the reason for antibiotic therapy had disappeared, but might occur during antibiotic treatment. The tongue, buccal mucosa, sense of taste and/or any part of the upper alimentary tract might be affected. Four cases are reported in detail and sixteen cases are tabulated under the headings of age, antecedent antibiotic treatment, and clinical symptoms. The tongue was affected in all cases.

Group 2. Infection of the intestinal tract with diarrhoea. The presenting complaint was usually that of a mild persistent diarrhoea which developed after antibiotic treatment of some infection usually not related to the gastro-intestinal tract. Culture of faeces on Sabouraud's medium revealed *C. albicans* in significant numbers. No other potentially pathogenic organisms were present to account for the illness. Of three cases described in detail, in two there was also generalized urticaria as a result of penicillin sensitivity. An additional three cases are mentioned in which *C. albicans* was isolated as the predominant organism on stool culture without giving rise to intestinal symptoms.

Group 3. Two cases are described in which broncho-pulmonary moniliasis appeared as a complication of antibiotic treatment for acute and chronic pulmonary infections. In both cases skin tests and agglutination tests for monilia were positive and desensitization with increasing strength of monilial vaccine was carried out.

The factors possibly responsible for the occurrence of the monilial infection are discussed. The most likely cause appears to be the suppression of the bacterial flora competing with *Candida* for nutrition in the same substrate.

Ferdinand Hillman


Of the 6,442 blind registered people in the 10-year period in Ohio, 2,427 had an ascertained cause of blindness; of these 20-9 per cent. were syphilitics (representing 59-5 per cent. of those cases caused by specific infections); there was no significant change in this proportion over the individual 10 years. Optic atrophy was present in 67-7 per cent., and interstitial keratitis in 10-4 per cent. Blindness due to gonorrhoeal ophthalmia had dropped from 0-8 per cent. to 0-4 per cent. from the preceding survey. Other aetiological factors are considered.

P. D. Trevor-Roper


The authors review 77 cases of erythema multiforme exudativum major from the literature and describe in
detail four cases of their own; twenty cases occurred between 0 and 9 years of age, 25 between 10 and 19 years, and 24 between 20 and 29. The remaining twelve patients were 30 or over. There were 66 males and fifteen females. The syndrome was much commoner in the winter months. The characteristic manifestations were often preceded by general malaise and signs of an upper respiratory tract infection. All had mouth lesions, frequently with great pain on swallowing. In 44 cases there was a grey or white membrane. In 23 there were vesicles and in thirteen there was ulceration. Frequently swelling, redness, and ulceration of the lip, followed by bleeding, occurred. Eye lesions were common, conjunctivitis occurring in 74 cases. In males there was often ulceration of the glans penis; of 66 males, thirty had penile lesions and seven had urethral discharge. A skin erosion was observed in 67 patients, developing between the first and fourteenth days, lasting for 5 to 46 days, usually about 3 weeks. The scalp was rarely affected, but otherwise the distribution was variable. The lesions were erythematous, vesicular, and bullous. Parenchymatous lung lesions occurred in 25 cases, and usually consisted of broncho-pneumonia and pneumonitis. There was no general lymphadenopathy. The spleen was felt in only one case. A variety of other signs and symptoms occurred in individual cases. There was commonly a polymorphonuclear leucocytosis.

Recurrences occurred in eighteen cases, and there were eight deaths. Attempts to isolate a causative organism have met with little success. The syndrome is thought to be an acute specific fever, possibly of virus aetiology, but there was no evidence of direct contagion. In two of the cases from the literature there was a good response to aureomycin; otherwise no specific treatment is known. R. S. Illingworth


