ABSTRACTS

(This section of the JOURNAL is published in collaboration with the two abstracting journals, Abstracts of World Medicine, and Abstracts of World Surgery, Obstetrics, and Gynecology, published by the British Medical Association. The abstracts are divided into the following sections: syphilis (general, therapeutic, pathology); gonorrhea (general, therapeutic, pathology); other venereal disease conditions; public health. 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)


Primary optic atrophy accounts for 90% of blindness due to syphilis and it is believed that in the United States there are at least 50,000 cases at any one time. The authors present a study of 397 patients with syphilitic primary optic atrophy; in 20 cases was the infection of congenital origin. The great majority of the cases of acquired syphilis were in males, 315 in contrast to only 62 females. Of the 20 patients with congenital syphilis, however, 11 were of the female sex. In the series 55%, of patients had tabes, 25% meningo-vascular syphilis, 15% tabo-paresis, and 5% general paresis. The first complaint of failing vision was usually made between the ages of 40 and 50 years. The majority of patients had received no treatment in the early stage of the infection, and few, if any, had received treatment in amounts considered adequate according to modern standards. In many of the patients the underlying neurosyphilis ran a silent course and impaired vision was the first and only symptom. Other early symptoms included pains in the legs, transient diplopia, impaired adaptation to light, and difficulty in distinguishing colours.

The most constant signs found in the series in addition to optic atrophy were positive tests for syphilis in the blood and cerebrospinal fluid and pupillary abnormalities, namely, inequality, irregularity, sluggish reaction to light, Argyll Robertson pupils, or fixed pupils. The history of poor vision varied from a few weeks or months to years; some patients became blind in a year or less. The progression of optic atrophy and the degree of visual failure were often serious before the patient became aware of the impairment. Methods of ophthalmic diagnosis are discussed. The authors believe that a defect in the visual field usually precedes loss of central vision or pallor of the optic disk and is the earliest symptom of optic atrophy. A visual field defect as an isolated finding in a patient with syphilis is suggestive of the beginning of optic atrophy. The histories and progress of selected cases, together with visual field charts, are recorded.

The authors comment adversely upon the delay in the diagnosis of syphilitic optic atrophy in their cases; 61% of the patients when first seen were either "industrially" blind or had a visual acuity of less than 1/60. They recommend that the ophthalmoscope and the perimeter should be part of the equipment of every syphilis clinic, and that every patient suffering from neurosyphilis should be examined ophthalmologically.

V. E. Lloyd

SYphilis (Pathology)


This is a review of 37 cases of syphilitic paroxysmal hemoglobinuria, with a discussion of the difference between this condition and cold hemoglobinuria not associated with syphilis. In syphilitic cases the hemolysis becomes fixed to the red cells in the cold, and is activated in the presence of complement only when the blood is again warmed. The Donath-Landsteiner test illustrates this in vitro. In paroxysmal cold hemoglobinuria there is a high titre of cold agglutinins, which causes hemolysis on exposure to cold alone. Cold agglutinins are usually present in a titre of over 1 in 3,000. In the syphilitic type positive blood Wassermann and Kahn reactions are essential for diagnosis, and the presence of complement is necessary for hemolysis. In this type, again, a dermolsyn can be demonstrated, although its effect can be minimized by the administration of antihistamine drugs. No dermolsyn is demonstrable in the serum of patients with cold hemoglobinuria. Urticaria is therefore seen only in the syphilitic type of disease. In syphilis the hemolysis is type-specific, whereas the cold agglutinins act on all types of blood as well as on the blood of other animals. Antisyphilitic treatment results in cure or amelioration of the condition in most cases of syphilitic paroxysmal cold hemoglobinuria. A case in which a successful response was obtained to treatment with penicillin is presented in detail. Alan Kekwick


The authors investigated the extent to which a reversal of positive Koller complement-fixation tests with spinal fluid and blood occurs after treatment of neurosyphilitic patients with penicillin or penicillin and malaria.

The series of 120 comprised 70 cases of paresis and taboparesis, 21 of tabes dorsalis, and 29 of meningovascular syphilis. Penicillin alone, 30,000 units every 3 hours by day and night to a total of 2,400,000 to 6,000,000 units, was given to 56 patients. Penicillin together with malaria was given to 64 patients; the average number of hours of the duration of fever above 103° F. was 39-5. Reversal of previously positive reactions in the cerebrospinal fluid was recorded when the result was one plus or less in 1 ml. of spinal fluid. In the blood a negative or doubtful result in a dilution of serum of 1:2.5 was taken as cephalin reversal. The patients were observed over a period amounting in some cases to 3 years, the average period for the group being 18-9 months.
ABSTRACTS

In the series as a whole in 88-9%, the result was reversed in the cerebrospinal fluid within 18 months of treatment. The repeated tests show little difference as regards frequency of reversal between the cases of paresis and those of tabes (about 23% in each group); among the cases of meningovascular syphilis reversal was much more frequent (51-7%). The trend towards reversal was slower in the blood than in the cerebrospinal fluid. Some of the patients had been treated previously with arsenicals and bismuth during a 6-month period and in these a higher proportion (37-1%) of satisfactory results was noted.

This striking difference in favour of penicillin alone is thought to be due to the selection of patients, but even so the authors consider that penicillin alone is at least as effective as penicillin together with malaria for most types of neurosyphilis.

V. E. Lloyd


Five strains of treponema that have lost, during repeated subculture, any pathogenicity they ever possessed, were examined by agglutination and complement-fixation tests for comparison with Treponema pallidum. Two strains (Nichols and Noguchi) were serologically indistinguishable. Two strains (Kazan and Reiter) cross-reacted but were not identical. Reiter strain is serologically almost identical with two strains of saprophytic mouth treponema. One strain (Kroo) was serologically distinct from the other four. Rabbits injected with any of these four strains developed agglutinating and complement-fixing antibodies, but no Wassermann or flocculating antibodies. Syphilitic sera absorbed with suspensions of the Reiter and Kazan strains lost all power to react with these organisms, but retained all Wassermann and flocculating activity. Immunization of rabbits with any of these four strains conferred on them no immunity with T. pallidum.

On these grounds the authors consider that strains Nichols, Noguchi, Kazan, Reiter, and Kroo, are not, and probably never were, T. pallidum.

C. L. Oakley

Caronamide and Penicillin. Serum Levels in Human Beings, Following Multiple Doses of the Drugs. MEADS, M., Long, R. V., Pace, S. H., and HARRELL, G. T. (1948). J. Amer. med. Ass., 138, 874. The effect of caronamide given by mouth 4-hourly for 3 days on the serum penicillin levels of 17 patients was studied. None of them was over 60 years old or showed evidence of impaired renal, cardiac, or hepatic function, and all received 100,000 units of penicillin 4-hourly for 7 days. On the 2nd, 3rd, and 4th days caronamide was given 4-hourly, half an hour before meals. From 7 patients receiving 2 g., and from 5 receiving 4 g., 1 to 3 blood samples were taken 4 hours after administration of the drugs, and from 5 patients receiving 4 g. samples were taken after 2 hours. Serum was stored at —20° C. The penicillin content was estimated by a serial dilution method, and the caronamide by the colorimetric method of Ziegler and Sprague.

It was found that a concentration of 25 mg. of caronamide per 100 ml. of serum was necessary to achieve a twofold increase in penicillin concentration. A dose of 4 g. 4-hourly was required to produce a serum caronamide concentration of 30 mg. per 100 ml. 4 hours after administra-

J. E. M. Whitehead


The following bismuth preparations were used in experiments on rabbits: (1) "biochinol" [an 8% solution of this drug has 0.02 g. of metallic bismuth in 1 ml. together with iodine and quinine in unspecified quantities]; (2) "polibisol" [containing 4% of bismuth dissolved in cottonseed oil]; and (3) bismuth salicylate [with 0.05 g. of metallic bismuth in 1 ml. dissolved in oil of apricots]. The experiments were made with a view to ascertaining whether or not penicillin dissolved in any of the above drugs can be retained in the organism of experimental animals in sufficient concentration to enhance and accelerate the effect of combined therapy in cases of syphilis. The same batch of penicillin was dissolved in each of the above three drugs, in cottonseed oil or sunflower-seed oil, and in water; each solution was injected intramuscularly into rabbits; the animals were catheterized every hour, and the urine so obtained was examined for penicillin content by serial dilution and on Petri dishes containing staphylococcus cultures (strain No. 209); each animal received 2,000 units of penicillin per kilo body weight and 1 ml. of biochinol (or of the other two drugs) per kilo body weight. The concentration of penicillin in the urine after injection of an aqueous solution of penicillin was higher than after similar injections with biochinol and penicillin or oil and penicillin combinations; after 24 hours no penicillin could be found in the urine, irrespective of the combination injected intramuscularly. The concentration of penicillin in the urine was lowest after giving biochinol and penicillin. In the first 3 hours the concentration of penicillin in the urine after giving polibisol and penicillin combination was lower than after injection of aqueous solution of penicillin, but the reverse was the case in the subsequent 4 to 5 hours. Elimination of penicillin introduced together with bismuth salicylate lasted longer than after injection of an aqueous solution of penicillin. It is concluded that bismuth reduced, to a varying extent, excretion of penicillin in the urine; the variable effect of different bismuth preparations is ascribed to the presence of other (non-bismuth) compounds. The efficacy of combined bismuth and penicillin therapy in experimental syphilis will form the subject of a subsequent communication.

H. P. Fox


SYphilIS (Therapeutic)


An additive or synergistic effect had previously been demonstrated in experimental syphilis in rabbits when oxypenarsazine hydrochloride intravenously or a bismuth compound intramuscularly was combined with penicillin given by intramuscular injection. The present paper describes experiments which show that a similar synergistic action occurs when the penicillin is administered by the oral route. The latter route is not recommended for the treatment of early syphilis in human beings, but the author suggests its trial in patients with congenital and late acquired syphilis. He also believes that intramuscular injection of oxypenarsazine hydrochloride suspended in peanut oil or peanut oil and wax is more potent than sulfurarsphenamine in the treatment of congenital syphilis in infants and young children or of adults in whom intravenous injection is technically difficult.

S. M. Laird


The value of penicillin in syphilis is well established but the optimum dosage remains to be agreed. Early studies indicated that dosage should be greater than 2,400,000 units, and further investigations have been directed toward determining the result of: (a) utilizing larger total dosages, and (b) prolonging the duration of treatment. The present paper reports the preliminary results in 123 cases of syphilis diagnosed by dark-field examination treated with 4,800,000 units of commercial sodium penicillin in 7½ days (6 intramuscular injections of 50,000 units at 2-hourly intervals). At the end of 11 months of observation, the cumulative percentage of treatment failures was approximately 17%, and comparison of this series with other studies previously reported indicates that these results are no better than those obtained with 1,200,000 and 2,400,000 units over 7½ days. The work of Eagle and his associates on syphilis in rabbits has demonstrated the importance of the duration of treatment in relation to the dosage employed and the results in the present paper in syphilis in human subjects again underline the significance of the time-dose relationship. [This paper is a model for carrying out comparative studies of different treatment schedules and should be read in full.] S. M. Laird


Clinical research on the treatment of early syphilis with penicillin has been unable to keep pace with the changes that have occurred in the preparations of the drug used; the time-dose relation in penicillin schedules depends on the rate of absorption of the penicillin preparations used. To obtain continuously effective concentrations in blood, injections of 20,000, 40,000, or 60,000 units of aqueous penicillin must be given every 2 to 4 hours, or 300,000 to 600,000 units of penicillin in oil and beeswax daily. Experiments with rabbit syphilis show that prolonged action is a more important factor in effecting a cure than is a high level in the blood. It seems that penicillin must be active within the body for at least 2 to 4 days to cure many cases of early syphilis, and that when penicillin in oil and wax is used a dose of 300,000 to 600,000 units daily for 15 days is advisable.

After 2 to 4 million units of aqueous penicillin had been given in 7½ days the failure rate was 20%; after 600,000 units of penicillin in oil and beeswax daily for 8 days the same unsatisfactory percentage of failures was encountered. At Bellevue Hospital, however, when administration of the latter dose and preparation was prolonged for 15 days only 2 possible failures occurred among 132 patients followed up for 4 to 9 months. Possibly comparable results may be obtained with the new slowly absorbed procaine penicillin G in oil "gel" with 2% aluminum monostearate by giving an injection of 1,200,000 units once a week for 2 weeks, or alternatively 600,000 units twice a week for 3 weeks.

T. Anwyl-Davies


The author reviews current literature, analyses the records of the syphilis clinic at Johns Hopkins Hospital, and considers the effects of intramuscularly administered penicillin on the mucocutaneous, osteoarticular, and visceral lesions of late acquired syphilis. Total doses ranging from 320,000 to 7,000,000 units given to 34 patients with cutaneous and mucous membrane gummata failed to effect complete healing in less than 9% of cases during a mean observation period of 364 days. The rate of healing, in 2 months, seemed to be no more or no less rapid than that achieved by older methods of therapy, nor were the comparative effects of amorphous penicillin and crystalline penicillin G (10 cases) sufficiently striking to justify comment.

Doses ranging from 6,000 to 7,000,000 units given to 16 patients with osteitis, osteomyelitis, and periostitis achieved satisfactory end results (over a mean observation period of 706 days) as judged by disappearance of symptoms referable to the skeletal system and radiological evidence of arrest or repair of bone lesions in all cases. In 1 case, however, 8 months after 1,620,000 units had been given for syphilitic osteomyelitis and periostitis of the radius, a nodular serpiginous syphilide of the forearm appeared. Satisfactory results were obtained in approximately 90% of these cases of tertiary syphilis with a single course of penicillin alone, but cases of extensive gummatus involvement may require arsenic and bismuth as well as penicillin.

T. Anwyl-Davies


The following therapeutic procedure was used in cases of syphilis: (a) each patient received 3-hourly intramuscular injections of 40,000 units of penicillin, the total dose being from 1,200,000 to 3,400,000 units; (b) the patient was then given, without any interval, 6 g. of neoarsphenamine in a daily dose of 0.15 g., and a total of 45 to 50 g. of "biochinol" (a preparation of quinine (iodo-bismuthate). This course was completed in 80 to 90 days and was given to 100 men and women; ages and diagnoses are given in detail. In addition, a group of 34 patients were treated with penicillin alone, 3,400,000 units in 8 days. Most patients tolerated the therapy...
ABSTRACTS


This is the fourth of a series of annual reports on the treatment of neurosyphilis with penicillin alone; spinal fluid normality and "near-normality" were maintained in 47 and 19% of cases respectively; during the fourth year the proportion of normal spinal fluid increased from 18 to 25%. Three graphs show that few patients with asymptomatic neurosyphilis achieve a normal or nearly normal spinal fluid; in a few cases there is failure or relapse, but initial failure does not rule out final success; in paresis and tabo-paresis the prognosis is poorer but cases tend to improve with time and the incidence of relapse in the spinal fluid is low; in tabes abnormal spinal fluid responds rapidly and completely.

The percentages of normal or nearly normal fluid after 2 years or more in the various types of neurosyphilis are as follows: paresis 46, tabo-paresis 60, meningo-vascular syphilis 60, asymptomatic syphilis 74, and tabes 80.

Seventeen case histories are given in detail; these bring out various characteristics of the different types of response to penicillin and to more time-honoured methods of treating each type of neurosyphilis; one striking feature is the frequent failure to reduce the number of rea gin units in the blood, even when spinal fluid changes show great improvement.

In one case of meningo-vascular syphilis, 12 injections of arsphenamine, 86 of bismuth, and 91 of tryparsamide had no effect; 14/4 mega units of penicillin elicited a marked response but this was followed by a relapse; in another, 1/2 mega units accomplished as much as 14 Swift-Ellis treatments and 34 bismuth injections; in two cases Herxheimer reactions were rather severe. It is concluded that in all types of neurosyphilis penicillin is superior to other forms of treatment and is safer as well. [No comparison is made between results of penicillin alone and of penicillin combined with fever therapy.] T. E. Osmond


This report includes observations on 223 patients followed up for one year and 104 for 2 years after treatment with penicillin alone or with penicillin plus malaria; all were suffering from neurosyphilis. The dose of penicillin was 4,000,000 units in 12 days, and of malaria 50 or more hours of fever over 103.5°F. At the end of one year 79% of those treated with penicillin alone had improved clinically and 83%, as regards the spinal fluid; when penicillin and malaria had been used the respective figures were 69 and 89%. At the end of 2 years the respective figures were 86 and 85% for penicillin alone and 66 and 98% for combined treatment. No patient whose condition had not deteriorated during the first year showed deterioration clinically or on spinal fluid testing during the second. The cell count, protein content, reagin units, and gold curves showed very much the same change with both forms of treatment and in both groups [though all the cerebrospinal fluid abnormalities were initially greater in the group given penicillin and malaria, but in tabo-paresis and paresis the combined treatment produced improvement more rapidly and showed a year later superiority of 5 to 10% over 2 years]. It is concluded that penicillin alone is just as effective as when combined with malaria in asymptomatic and meningo-vascular neurosyphilis and tabes and very nearly as effective in paresis; peni-
cillin treatment alone is much safer and is therefore the treatment of choice; it seems possible that with longer periods of observation any advantage held by combined treatment will disappear. T. E. Osmond


The association of paroxysmal hypertension with tabes dorsalis has received little attention but is important because by its recognition needless surgical exploration of the adrenals may be avoided. References to some 22 cases in the literature are listed, and the authors report 3 more cases in detail. Previous reports have stressed the association of sudden rises in arterial pressure with gastric crises, but these were present in only one of the author's patients. In this instance, the attacks were painless and accompanied only by nausea and vomiting. In the second patient the hypertension was entirely asymptomatic, and in the third the arterial paroxysms were symptomless except for occasional association with lightning pains. Penicillin treatment benefited the hyperensive crises in the first patient, but not in the other 2 patients. The periods of hypertension may or may not be associated with symptoms, and the authors attribute them to disturbances of the autonomic nervous system.

T. Anwyl-Davies

GONORRHOEA (Therapeutic)


Fourteen patients with gonorrhoea were treated by one injection of 200,000 to 300,000 units of penicillin dissolved in blood. As rapid cures were obtained, the author suggests that the blood retarded the absorption of penicillin. [It seems unjustified to draw this conclusion with such small amounts of penicillin in the blood, besides, the amount of penicillin given in this one injection has, in the abstractor's experience, cured many cases of gonorrhoea without the addition of blood.]

G. W. Csonka

OTHER VENEREAL DISEASE CONDITIONS


Genital warts in 109 male patients, part of a larger series of 150, were treated with podophyllin and the cases were subsequently followed up. In 53 the warts were the only lesions present; in 25 there was gonorrhoea and in 21 balano-posthitis in addition. Two patients had perianal warts (one had penile warts also) and 7 had intramural warts; in 5 of the latter this was the only site affected.

The warts were painted with 25% podophyllin in oil and the patients were instructed to wash the area after 24 hours and daily after this time. The warts were observed 3 and 8 days and 4 weeks after treatment, when they were repainted if necessary. Seventy patients were cured with 1 application, 11 with 2 applications, and 8 with 3 applications, though there were 14 relapses; 103 patients were finally cured and there were only 6 failures. Three of the 7 cases of iniraurethral warts required 3 applications and 1 case ultimately proved resistant, as did one of the two cases of perianal warts. Forty-two patients had some local reaction to treatment with a marked balano-posthitis in 12 and severe inflammation requiring admission to hospital in 4. Skin tests carried out with podophyllin on 2 patients who had had severe reactions gave negative results.

R. R. Wilcox


The active complement-fixing fraction was extracted with anesthetic ether from suspensions of yolk sacs infected with the viruses of lymphogranuloma venereum (Johns Hopkins strain), meningo-pneumonitis, and mouse pneumonitis. Advantage was taken of the insolubility in acetone and alcohol of the active substance to prepare a highly purified fraction which, though inactive by itself, was activated by the addition of optimal amounts of lecithin, either of yolk-sac or of vegetable origin. A saline suspension of the ether-soluble antigen showed no loss of activity when stored at refrigerator temperature for more than 18 months. A chloroform extract was also active but benzene extracts were only slightly active and petroleum ether extracts inactive, though in the suspensions after such extractions activity was enhanced.

Purified antigens and ether-extracted suspensions were group-positive for the sera of patients infected with the viruses of the psittacosis and lymphogranuloma venereum group, while the purified ether-extracted antigen to which lecithin had been added proved a satisfactory antigen for use in complement-fixation tests with viruses of this group.

R. R. Wilcox


Though claims have been made for the successful use in lymphogranuloma venereum of various chemotherapeutic agents, it is probable that only secondary infections are affected by them and not the actual primary disease. The authors were supplied with a new antibiotic called aureomycin, of which no details are given in the present paper but which, as they were informed, had been found very effective in mice infected intracerebrally with the virus of lymphogranuloma venereum.

The 25 cases reported fall into three groups: (1) 8 patients with buboes; (2) 3 with proctitis; and (3) 14 with benign rectal strictures. In the first group treatment consisted of a single daily intramuscular injection of 20 mg., with in 2 cases a single injection of 20 mg. into the bubo. In all cases there was a reduction in size of the bubo after 4 days, and in the 3 in which elementary and initial bodies had been found these disappeared after about 9 days. For the second group of patients treatment was similar, the total doses being 60, 200, and 220 mg. respectively. After 4 days 2 had lost all tenderess and discharge, and in the third rectal bleeding ceased after 8 days. No abnormalities in the mucosa were found in any on proctoscopic examination at the end of treatment. One patient was readmitted after 17 days with recurrence or re-infection, which cleared
ABSTRACTS

PUBLIC HEALTH


The question often arises as to the advisability of antisyphilitic treatment for the pregnant woman who has previously received such therapy. It has been customary for many years to advise that the mother should be treated during every pregnancy subsequent to the original treatment.

The individual and public health importance of this problem led to the inauguration, in 1939, at the Family Syphilis Clinic of the Johns Hopkins Hospital, of a study of the outcome of pregnancy in women who had received adequate treatment for syphilis and who were observed but not treated during subsequent pregnancies. The original criteria for inclusion in the study were: (1) a reasonably accurate history or, if no definite history was obtainable, a reasonable presumption of maternal syphilis of at least 2 years' duration before the pregnancy in which the patient was to be deliberately untreated; (2) completion of adequate treatment (2 to 4 g. of arsphenamine or equivalent dosage of other arsenical compounds) previous to the pregnancy under observation; (3) negative results of maternally tests for syphilis before and after the observed pregnancy; (4) normal maternal spinal-fluid findings; (5) no evidence of active maternal infection on physical examination; (6) at least one successful pregnancy, not necessarily occurring after the previous treatment. These criteria were relaxed later to include 24 women whose infection was of less than 2 years' duration and who had already completed treatment before the pregnancy; some whose blood reactions were still positive in spite of treatment, if physical signs of infection were lacking; 98 who did not have spinal-fluid examinations; and 12 with abnormal but inactive spinal fluids. All mothers in the series had a quantitative blood test for syphilis and a physical examination at monthly intervals throughout pregnancy, after which the infant received appropriate blood tests and physical (when possible radiological) examination to detect any signs of syphilis.

The group comprised 363 mothers, of whom 159 had suffered from early syphilis and 128 from late syphilis at the time of the original treatment; congenital syphilis in the mother was diagnosed in 48 cases; in 28 the stage of infection remained unclassified. Of these women 332 had received more than 4 g. of an arsenical preparation together with bismuth or mercury before the start of the observed pregnancy. These 363 previously treated women were observed through 570 untreated pregnancies. In the group were 61 mothers whose blood was serum-positive, but in 27 of them it was of low titre. There were 523 live births (1 twin), 22 stillbirths, and 26 abortions; the fetal death rate was lower than the normal for non-syphilitic pregnancies. Pathological examinations of 8 of the products of abortion and of 12 of the stillborn infants revealed no evidence of syphilis. Of the 523 live infants 458 were followed up for more than 2 months after birth: all remained free from evidence of syphilis. No signs of infection were noted in the 257 followed up for more than a year and in the 141 followed up for more than 3 years.

A further small group of 22 women, all attending in the early stage of syphilis, had been treated with penicillin alone (2-4 mega units or more). None of the 26 offspring of these women developed congenital syphilis.

Among their conclusions the authors state that their data indicate that it is not necessary to administer anti-
syphilitic treatment to a syphilitic woman during every pregnancy; and that there is a high degree of probability that the infant will be normal if maternal treatment is withheld: (a) regardless of the stage and duration of syphilitic infection in the mother at the time of the original diagnosis and treatment; and (b) regardless of the interval between the previous treatment and the pregnancy during which it is intended to omit further treatment; provided that (c) the mother has previously received 4 g. of an arsenical drug together with concomitant bismuth, or 2.4 or more mega units of penicillin (given for early syphilis in herself); this probably holds good for a maternal diagnosis of late latent syphilis as well, whether this treatment was given during a previous pregnancy or during a non-pregnant interval; and (d) the mother shows no clinical signs of active syphilitic infection and (e) is serum-negative or, if still serum-positive, in low titre only (1 to 8 dilution units).

V. E. Lloyd

Retreatment of the Pregnant Woman for Syphilis Following Penicillin. Is Additional Therapy Necessary when Effective Treatment has been Given Prior to Conception?


It is current practice in most venereal diseases clinics to give all expectant mothers who have been treated, albeit inadequately, for syphilis during the 5 years before pregnancy an extra course of penicillin for the sake of the child. Such a measure is practically without risk to mother or child and, even if the patient is considered "cured," seems reasonable even if the need for it has yet to be proved. This paper, from a relatively small series of patients, attempts to assess the fate of the child if no such treatment is given.

Fifty-two mothers (48 negro and 4 white) were studied; 20 were treated with penicillin for syphilis during a previous pregnancy and 32 for syphilis before conception; 26 had 1,200,000 units, 18 had 2,400,000 units, and 8 greater amounts than this. At the time of treatment 39 had had early symptomatic syphilis, 10 early latent, and 3 late symptomatic syphilis; of these 28, 6, and 2 mothers respectively were serum-negative at the time of delivery (that is, 36 were negative and 16 positive). As a result of the 52 pregnancies there were 46 apparently normal healthy children, 3 abortions, one miscarriage at 5 months, one stillbirth, and one premature infant who died at the age of 2 days. Although no necropsy was performed on the latter syphilitic could not be positively incriminated for any of the 6 failures to produce a healthy infant; the incidence of failures is not greater than would be expected from a similar group of non-syphilitic women. Of the infants 45 were serum-negative at birth; in the other the titre was one Kahn unit only, though there was an accompanying high titre (128 units) in the mother. The follow-up of the children, during which time serum tests and radiological examinations of the long bones were performed, was less than 2 months in 20, from 2 to 6 months in 6, from 6 to 12 months in 8, and more than 12 months in 12.

[The authors acknowledge the inadequacy of the follow-up period and a later report on this material will prove interesting.]

R. R. Wilcox

MISCELLANEOUS


This paper records an examination in man of the absorption-delaying effects of suspending penicillin salts in peanut oil "gelled" by the water-repellent aluminium stearates. Assays were performed by 2 different methods in 4 assay laboratories. Control blood samples were withdrawn before the injection; each patient then received 300,000 units. Consecutive blood samples were taken and the results expressed as the percentages for all patients in whom the concentration of penicillin in the blood was 0.03 unit per ml. or above at 1-hour and at 12, 24, 30, 36, 40, 48, 72, and 96 hours after administration. The percentage of particles of each product with a diameter of 50 μ varied from 50 to over 95. The salts examined were: (1) sodium penicillin G in peanut oil with 4.6% weight/volume (w/v) of white wax and with 2% (w/v) of aluminium monostearate; (2) procaine penicillin G in peanut oil, in peanut oil with 2% (w/v) of aluminium stearate (large particles), in peanut oil with 2% (w/v) aluminium monostearate (small particles); and (3) aluminium penicillin in peanut oil with 2% (w/v) aluminium monostearate.

The absorption of all salts was delayed longer in the aluminium monostearate in peanut oil gel than in peanut oil alone or peanut oil plus wax. An interesting result is that procaine penicillin in peanut oil gelled with 2% aluminium monostearate of small particle size gave a more prolonged effective blood level than did the same combination with large-sized particles of penicillin. No undue irritation or any other effects were observed with aluminium monostearate in peanut oil.

Malcolm Woodbine


Two unusual cases in negro children are described. In the first case a 3-year-old boy presented a lesion simulating a primary syphilitic chancre on the penis; in the second case a somewhat similar lesion developed on the lower lip of a 10-year-old girl. The authors describe the laboratory studies, which established the diagnosis of accidental vaccination. In the discussion they state that the procedures applicable to the diagnosis of vaccinia are the same as those used in the diagnosis of other virus diseases: (1) the clinical history and findings; (2) the isolation and identification of the causative agent; (3) demonstration of a specific immunological response of the patient to virus, and (4) demonstration of a specific histological change in the tissues of the infected patient in experimental animals. They believe that if one or two of these criteria are satisfied, the diagnosis is established.

R. M. B. MacKenna


[The authors acknowledge the inadequacy of the follow-up period and a later report on this material will prove interesting.]

R. R. Wilcox