THE EARLY DIAGNOSIS OF SYPHILIS

AND A COMPARATIVE STANDARDIZATION OF THE TREATMENT*

E. B. TAUBER, M.D.
CINCINNATI

In the problem of syphilis it is imperative to secure an earlier and more efficient diagnosis of the disease than is the case at the present and a more generalized effective treatment. This should be the keynote of our endeavors.

The early diagnosis of syphilis is an unknown quantity to many men who are practicing medicine in our times. To men who have the older ideas of the disease to guide them, ideas that are firmly planted in their minds by a couple of decades of practice, it seems almost sacrilege to insist that waiting for secondaries is a criminal action and that we lose the benefit of the one psychologic moment in the life history of syphilis when we can seize our real opportunity.

The definite diagnosis in the early primary stage before the spirochete has spread to the lymphatic system near the primary lesion and before the serologic reaction is positive is the one and only time that, taken advantage of, may lead to success; and it is the time for action instant and effective. This is the time for radical cure if such is possible. An injection of arsphenamin here can put an immediate end to infectivity of the case. A sterilization complete and entire seems possible here. The suppression of the biologic and serologic evidence of the disease is possible and maybe probable here. This should be our treatment for paresis, tabes dorsalis, iritis, etc.

PROPHYLAXIS OR TREATMENT THAT WILL PREVENT THESE CONDITIONS

The first week or so of the initial lesion, while syphilis is still a local condition, is the time that we should employ every energy and endeavor of our diagnostic and therapeutic armamentarium to cure, for never again in the picture of syphilis for the individual patient or the state will this moment return.

Our public health services, medical colleges, hospitals, and clinics must teach this point and ever impress it on all in contact with them; that is, the student groups, the nursing groups and the public in general, these facts and necessities.

The dark field examination must be a routine at the clinics, in the hospitals and in our private practice. The organism must be known and recognized by all.

The newer staining methods, such as the Medalia method, must be taught generally. There can be no valid objection to teaching the profession of the future and the present the only means of diagnosis for the period when the dangerous sequelae may be mastered and dominated by us.

Every sore, whether on the genitalia or elsewhere, is or should be open to a suspicion of chancre and should be repeatedly examined for *Spirochaeta pallida*. Every papule, nodule, crack, excoriation, and herpetic or other erosion should be viewed with the possibility of an initial lesion and should be examined for *Spirochaeta pallida*. Chancroids should not be accepted as uncomplicated with syphilis; double infection is always possible.

Antiseptics applied, especially mercurials, make the finding of *Spirochaeta pallida* difficult or almost impossible; and because of this we should teach that no mercurial dressings, or better still, no antiseptics, should be applied to any lesions until the examination for *Spirochaeta pallida* has been made, and if any have been used, it should be made a routine to irrigate thoroughly with physiologic sodium chlorid solution and to apply a wet dressing of the solution for twelve hours or more before examining for *Spirochaeta pallida*. To obtain *Spirochaeta pallida*, a definite method is important. We have used in the Cincinnati General Hospital this method:

The surface of the lesion is wiped with a cotton sponge to remove superficial organisms. The wound may be rubbed or teased lightly, but one should not cause bleeding; just an oozing that will give serum to transfer to a new clean slide and slip should be produced. Immersion oil is put on both the under surface of the slide and upper surface of the cover. This will give a continuous airless medium from dark field to objective. A focus with fine adjustment should be secured until one gets a dark background with the glistening moving particles in white rings. Then a search for the twisting spirochetes may be instituted.

As a professional body, let us be honest and acknowledge we have not spread the vital importance of early diagnosis. It has taken a world war to impress on us that the modern conceptions of syphilis have not been taught in our medical colleges. We have zealously striven to whitewash the episodes occurring in the wrecks due to this disease. We have had clinical characteristics and endless discussions as to secondaries and tertiaries and neurosyphilis; forgetting that we were proving our guilt in this very manner; and now we must scrap our clinical differences and turn to laboratory diagnosis to the finding of *Spirochaeta pallida*. I do not mean here the serologic diagnosis, for then we are losing our great opportunity.

TRAINING THE PROFESSION TO EARLY DIAGNOSIS

How can we create this? This is our tremendous duty. You must all aid this. We must aid all the men who will do dark-field work in the smaller towns and villages and show them and others by our support that we are back of them. The internists, the surgeons of the smaller localities must call on the man in that locality who has special knowledge of syphilis, and this will cause the demand to be supplied. We must send to Coventry the man who cauterizes or applies some medicament to the sore on the penis or other location before advice, and competent advice at that, is given and the dark-field tests are made.

In early syphilis, systematic treatment must be immediate and must be pushed vigorously; sledge hammer treatment here is indicated, not feather duster types of treatment. Syphilographers will doubtless agree that the effective time for arsphenamin is early, before the serologic tests are positive. So, then, this places on us the burden of outlining a method or schema for treatment that shall be more or less standardized. Here I mean a treatment for the majority of cases, not for individual ones; also a treatment that will not be inflexible but one that has been tried over a long period of time in a sufficient number of cases to at least have the merit of being successful. The

* Read before the Section on Urology at the Seventieth Annual Session of the American Medical Association, Atlantic City, N. J., June, 1919.

outline I wish to submit has been tried at the Cincinnati General Hospital, the outpatient dispensary, the night venereal clinic and in my private practice, all of which I have under my control, and our results have been very good. Our method is as follows:

A SUCCESSFUL METHOD OF TREATMENT

Courses of from four to six intravenous injections of arsphenamin of from 0.3 to 0.6 gm. at intervals of from three to seven days are given, combined with mercury. Here we may with one or two such courses effect a cure. But even with such vigorous treatment a second or third course of arsphenamin of the same type is advisable after a two months' interval, given with the same courses of mercury.

In all cases, after the Wassermann test is positive, I believe at least three such courses of both arsphenamin and mercury to be the minimum, and more can be given as indicated. I believe that mercury, given either by intramuscular injections of soluble or insoluble preparations or by rubs, is of great aid to our arsphenamin therapy, and in the rational cure of syphilis, mercury and arsphenamin must be combined.

The courses of mercury should be from ten to twelve injections, at weekly intervals, of an insoluble; or from twenty-four to thirty, given every other day, of a soluble, or thirty to forty daily inunctions. I myself believe in giving one course of each type of mercury with each course of arsphenamin. Serologic tests should be made once a month at first, and later at two month intervals, until the test seems to become permanently negative as shown by at least five unbroken negative tests, each six months apart, with no treatment and no clinical evidence of syphilis before we should become in the least optimistic in regard to the case as being checked or cured.

It is my opinion that provocative injections and spinal puncture with the colloidal gold test may be made; but there is a difference of opinion as to this need, except in cases that require these special methods.

In late syphilis, mercury and iodids should be pushed in courses with arsphenamin given in the same way.

In secondary syphilis, the first year, three courses as above outlined of from six to eight doses of arsphenamin in each course, combined with mercury, and not less than three of such courses are indicated.

The second year, if the Wassermann test remains positive or there is recurrence of any lesion, practically a repetition of the first year's treatment, as outlined, will be necessary.

If the Wassermann test is negative and remains negative and there is no recurrence of lesions, at least four doses of arsphenamin in conjunction with two courses of mercury are recommended.

The third year, if the Wassermann test remains negative and there have been no recurrences from the first year, a patient should pass into a period of observation with regular periods for a serologic examination. If there is any nerve involvement or tabes and paresis, the treatment will depend on the individual case and will be covered by any general methods; but treatment must be pushed for years.

Congenital or hereditary syphilis requires longer and more persistent treatment; but again more individual treatment is necessary and cannot be outlined in the same way that early acquired syphilis can be. To recapitulate, my outline is as follows as regards standardization for early syphilis:

Arsphenamin and mercury to be given combined.

Arsphenamin, each course from four to six doses of from 0.3 to 0.6 gm. intravenously at three to seven day intervals.

Mercury (insoluble), gray oil, mercuric salicylate, twelve doses at weekly intervals, dose from three to five minims.

Mercury (soluble), twenty-four to thirty injections of mercuric cyanid or mercuric chlorid, given every other day.

Rubs, twenty-four to thirty given every day.

First Year.—First course of treatment, from two to two and one-half months. Rest, one month. Second course of treatment, from two to two and one-half months. Rest, two months. Third course, from two to two and one-half months.

Second Year.—If Wassermann is negative, rest after third course for four months; mercury, two months; rest, four months; mercury, two months.

If Wassermann is positive, rest, two months; course of arsphenamin and mercury, two months; rest, two months; arsphenamin and mercury, two months; rest, two months; arsphenamin and mercury, two months.

Third Year.—If Wassermann is negative, patient passes to period of observation with regular serologic examinations.

If Wassermann is positive, rest after last course, two months; arsphenamin and mercury, two months; rest, two months; mercury course, two months; rest, two months; arsphenamin and mercury, two months, and so on, being controlled by serologic findings.

It is not easy to state when a cure is accomplished; but, in general, we can only say, by intensive therapy safety can be secured and in most cases a cure can be effected. This may result in overtreating in some cases, but it is better to err in this way than to undertreat a single one, and some cures require a definite amount of treatment on a definite basis, if the needed results are to be obtained. Therefore, before patients are told they are well, even after repeated negative Wassermann tests without treatment (for negative Wassermann tests during treatment only indicate that progress is being made), I consider it necessary that at least two or three years of negative serologic tests without treatment or recurrence of any symptoms indicative of syphilis shall elapse before we can even say that we think the pathologic condition is eliminated. In so brief a paper I could cover only majority cases, and no attempt has been made as regards treatment or outline for individual cases.

CONCLUSIONS

1. No single sign of improvement should be accepted as definite or final, and treatment should not be stopped at such indication. Only cessation of all around symptoms is indicative, and that only if it continues through years.

2. Arsphenamin therapy is necessary, since it controls infectivity and contagion. It yields quick results.

3. Mercury is essential but as a splint to our arsenic therapy and as an aid to permanence in cure.

4. Most syphilis is undertreated. Sledge hammer blows are indicated. Overtreatment is to be preferred to undertreatment.

5. It is better to be overconservative rather than optimistic in stating that a cure has been effected. Our modern therapy is still in too infantile a stage to justify anything but overconservatism.

I believe that specializing and efficiency tendencies can be obtained, and very ably, in the treatment of syphilis.

Hospitals and clinical centers in our larger cities can be used by smaller centers. The extension of wartime methods in the army to civil practice will and should come.

In a few words, I believe syphilis is as easily preventable as other infectious diseases. With syphilis an actual condition, it must be recognized early and treated early if its economic results are to be prevented. Thus our problem is early recognition and early treatment. The early period is its period of greatest transmission; also the period in which our chances of curing a patient are greatest. This places the burden squarely where it belongs, on us, the medical profession, and also on the public health service, medical schools, hospitals and clinics. These different agencies must individually disseminate knowledge, acquire competent teachers, and adequate equipment to give adequate treatment and to graduate competent physicians. This means that syphilis needs centralization, efficiency, control, and the teaching of the early diagnosis of syphilis and a comparative standardization of its treatment.

19 West Seventh Street.

UROLOGY IN THE UNITED STATES NAVY*

OSWALD S. LOWSLEY, M.D.
NEW YORK

The most important problem which presents itself to any one in charge of groups of individuals, civilian or military, is the maintenance of the good health of such persons. It has long been recognized that it is much more economical and, in fact, much easier to prevent certain diseases than to cure them. Smallpox, typhoid fever and last, and probably most important, venereal diseases are the most spectacular representatives of this group.

The urologist, serving with the United States Navy in the world war, was occupied to a certain extent with so-called major urologic problems, such as instrumentation (cystoscopy, endoscopy, etc.), and major and minor operations. His most important duties, however, were concerned with the prophylaxis and treatment of venereal diseases.

VENEREAL DISEASE IN U. S. NAVAL HISTORY

One examines the history of prophylaxis against venereal diseases in the United States Navy with a certain amount of pride. Admiral W. C. Braisted,[1] Surgeon-General of the Navy, said in his last annual report:

> The medical department of the Navy began fifteen years ago to apply prophylactic measures against venereal diseases, and since that time has steadily broadened its campaign into a well-rounded program for the prevention and control of these diseases. In addition to purely medical measures, an increasing amount of attention has been given to the moral and educational phases of the problem.
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> As individual opinions vary widely as to what steps may be properly undertaken to promote upright living and prevent the incidence of venereal diseases, and as there may be some misconception in regard to the attitude of the Navy in this matter, it seems fitting to outline the position taken by the bureau. Medical officers, both afloat and ashore, are charged with the duty of warning all persons in the naval service and particularly the newer, younger men, of the danger of acquiring venereal disease through illicit intercourse, and of the serious consequences of such disease. In the instruction given on health and personal hygiene they are required to emphasize the sin of impurity and the necessity of pure living for the fullest enjoyment of health and happiness and the best and most loyal service to the country.

As far back as 1905, a method of venereal prophylaxis was recommended for general use in the U. S. Navy by Medical Inspector Oliver Diehl.[2] Various methods of conducting the prophylaxis were instituted during the succeeding five years, reports of which were rendered from time to time. Surg. Raymond Spear[3] rendered an interesting report:

> In 1905, while the U. S. S. *Baltimore* was on the Asiatic Station, preventive treatment was given the men after their return from liberty, with the result that although the ship visited the ports of Sydney, Melbourne and the Auckland for a month each, there were practically no venereal cases on board, and the crew was "clean." This happy state of affairs was brought about by an intelligent commanding officer, who aided the medical officer in all his recommendations. The English ships which were in these ports at the same time as the *Baltimore,* in most cases, had over 25 per cent. of their crews infected with some sort of venereal disease; so the nonexistence of venereal disease on the *Baltimore* was due to the preventive treatment entirely.

P. A. Surg. W. J. Zalesky,[4] while stationed in New Orleans, in 1908, instituted a system of prophylaxis. Of his experience there he said:

> The personnel of the station consisted of eighteen sailor men and about sixty-six marines. During the fall of 1908 the men were given several talks as to precautionary measures, and urged to apply for prophylactic treatments at the yard dispensary. For three weeks following, twenty-three men applied for such treatments, but gradually the number of applicants declined, the men losing interest in the treatments. During these three weeks, no venereal trouble broke out, and with the decline of applicants the venereal cases again increased. Liberty was freely granted, the limits of the station ended nowhere. Under these conditions, control of the men was necessary, and in endeavoring to impress on them the importance of prophylactic treatments, the aid of the commanding officer was sought. The interview with this officer resulted in the publication and posting of the following order:
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> 1. Men who have had intercourse or have been exposed to venereal infection in any way will report immediately on their return to the barracks to the medical officer or his assistant on duty, at the sick bay.
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> 2. It is important that men so exposed report for a preventive treatment at least twelve or eighteen hours after contact, as a delay in treatment is less likely to prevent disease.
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> 3. Men will be examined at frequent intervals by the medical officer, and any man found concealing venereal troubles will be reported to the commanding officer.
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> 4. No reports are entered on the sickness and disability sheets of the enlistment records in carrying out preventive treatments.
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> 5. Men are informed that by reporting promptly and cooperating with the medical department in receiving preventive treatment they stand little chance of contracting venereal diseases and keep their body, record and surroundings clean.
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> Signed.....
> Captain....., U. S. M. C.
> Approved: Commanding Marines.
> .....Commandant.

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* Read before the Section on Urology at the Seventieth Annual Session of the American Medical Association, Atlantic City, N. J., June, 1919.

* Because of lack of space, this article is abbreviated in THE JOURNAL. The complete article appears in the Transactions of the Section and in the author's reprints. A copy of the latter will be sent by the author on receipt of a stamped addressed envelop.

1. Braisted, W. C.: Annual Report, Surgeon-General U. S. Navy, 1918, p. 172.

2. Diehl, Oliver: Venereal Prophylaxis on the Asiatic Station, U. S. Naval M. Bull., July, 1910, pp. 325-337.

3. Spear, Raymond: The Prevention of Venereal Diseases in the Navy, U. S. Naval M. Bull., April, 1910, pp. 146-150.

4. Zalesky, W. J.: Venereal Prophylaxis, U. S. Naval M. Bull., January, 1910, pp. 28-35.