studied with this end in view, such lesions were not observed.

3. Interstitial keratitis and pericorneal injection are frequent manifestations of generalization in some of various strains observed. In some, it seems to be deeper and more permanent than in others. It is more readily induced by repeated intravenous injections following the testicular lesion, if performed within two months of the testicular lesion. The organisms may be demonstrated in the corneal scrapings. This is suggestive of a definite secondary stage.

4. Ordinarily the rabbit develops only an initial lesion, following inoculation in the genitalia, eyes and eyebrows. Generalized syphilis without an initial lesion follows intravenous injections into various tissues and subcutaneous inoculations. This is suggested as having a possible bearing in the human disease. It would seem probable that the initial lesion, both in the human being and the rabbit, is an attempt at defense on the part of the individual, and that this power of reaction is possessed only in varying degree by certain tissues.

5. We are inclined to agree with Noguchi that the nervous tissue of the rabbit is resistant to syphilitic infection.

6. We were able to show that it is possible to produce nervous involvement in the rabbit without actual intracranial inoculation. We also succeeded in confirming Noguchi's sensitization experiments.

7. It was possible to demonstrate a generalized infection in rabbits from which the inoculated testicle had been removed before the initial lesion had fully developed. In one case the disease was transmitted by means of the blood serum of a rabbit, seventeen days before the initial lesion was palpable.

8. Nichols demonstrated that, in one strain at least, the removal of the inoculated testicle, as soon as the lesion was manifest, tended to favor the development of a lesion in the uninoculated testicle.

9. In our experiments, heating for five minutes at 50 C. killed the organisms. In a richly infected testicle kept at room temperature for fifty-six hours, it was possible to demonstrate slight rotary motion of the organism.

10. Two different strains were successfully inoculated into different testicles of the same rabbit on the same date. After a certain period, superinoculations are difficult to produce.

11. The interpretation of the lesions and manifestations of strains of syphilis in the rabbit so as to increase our knowledge of human syphilis requires the coincident study of the same and similar strains in the human being.

12. We have seen in the rabbit a peculiar late testicular manifestation following repeated injections, intravenous and otherwise. It shows itself as a small nodule in the testicle, and contains many very slender and elongated organisms with normal forms. When transferred, the normal type of organism appears.

13. From eight injections of human spinal fluid, only two successful inoculations were obtained.

14. We have not been able to discover any morphologic differences in the various strains studied.

15. No permanent alteration in the characteristics of the strains has been observed following prolonged growth and repeated transfers in the rabbit.

16. Granting that there are strains or types of syphilis, differing in invasiveness or predilection for

certain tissues, and having in mind more especially the nervous tissues, the individual resistance of the infected person must still be considered as a possible factor in the development of the disease.

This opportunity is taken to state that a general anesthetic was employed in all operations or procedures which might be accompanied by serious pain or discomfort to the animal, and the few animals which developed a paralysis or other untoward manifestation were promptly and painlessly killed.

DISCUSSION

Owing to the fact that a number of our deductions are based on more or less theoretical grounds, one must needs be quite sanguine to hope that the fuller experience of the years to come will confirm them all to the minutest detail. In its broader aspects, it is the purpose of this paper to suggest rather than to pronounce, and it is with the hope of stimulating interest along these lines that it is presented. A larger number of strains, especially of the nervous type, should be studied over a period of time by different observers, both in the human being and in the rabbit. This should accomplish much toward the end we have had in view, and would undoubtedly give us a better knowledge of the disease which we are coming to recognize as omnipresent, alike in the palace and in the hovel, the church and the brothel, afflicting young and old, rich and poor, the innocent and the guilty, the plague of all plagues.

Army Medical School.

REPORT OF A SERIES OF SIXTY-ONE EXTRAGENITAL CHANCRES*

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The extragenital chancre is by no means an uncommon sight — to the dermatologist, at any rate — and I feel a hesitancy in reporting to this section such a short series of cases. However, the affection is rather rarely encountered by the general practitioner and, consequently, the diagnosis is deferred, as a rule, until the appearance of the secondary symptoms, a time when much damage often has been done both to the patient and to his family.

DEFINITION

By the term "extragenital chancre" I mean the primary invasion of the *Spirochaeta pallida* on other parts of the body than the genitalia — hence the frequently used term "syphilis insontium." This type of syphilis has been known since the earliest times, and authentic epidemics of innocent syphilis have been reported as early as 1577 in Austria, 1592 in Switzerland and 1596 in Germany. Most of the earlier ones were due to cupping, bloodletting, scarifying, phlebotomy, breastdrawing and lactation.

Bulkley¹ collected 9,058 instances of authentic extragenital infection; 1,810, or 20 per cent., of these were on the lips; 1,148, or 12.5 per cent., on the breasts;

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¹ Read before the Section on Dermatology at the Sixty-Seventh Annual Session of the American Medical Association, Detroit, June, 1916.

1. Bulkley, L. D.: Syphilis Insontium, New York, Barley & Fairchild, 1894.

462, or 5 per cent., were on the hands, and the remainder were distributed to almost every conceivable part of the body.

The same author, in his private practice, noted 113 cases of extragenital syphilitic infection. The largest number, fifty, were on the lips. There were fifteen each on the tonsils and fingers, seven on the breasts, six on the tongue, and the remainder were distributed to the other parts of the body. The noteworthy thing was that seventy-one of the entire list were on or in the oral and pharyngeal cavities. Most of these infections were, of course, contracted in the ordinary everyday life from dishes, towels, drinking cups, kissing, etc. However, several of them were very much out of the ordinary: for example, a young woman, after being stung by a bee, allowed her male friend to place a piece of court plaster over the sting, of course, after moistening it with his lips, and a chancre resulted.

Ricord reports a case quite similar: A portly old gentleman acted as good Samaritan to a little boy whose head was cut while at play. Mucous patches in the old man's mouth made the boy an innocent victim of syphilis.

We are now all familiar with the champion kisser of Philadelphia, as reported by Dr. Schamberg — this young man having infected nine young women by the osculatory method.

Some peculiar occurrences also have come to my attention. I should like to report a series of sixty-one cases from my private practice and from the clinic for dermatology and syphilis at the Lakeside Hospital. It will hardly be worth while to describe each case in detail so I shall merely mention the important items in connection with the most striking ones.

The ages of the patients ranged from 2 months to 65 years.

AGES OF PATIENTS ARRANGED IN FIVE-YEAR GROUPS

Age Groups	Number
Less than 5 years.....	4
From 5 to 10 years.....	0
From 10 to 15 years.....	3
From 15 to 20 years.....	7
From 20 to 25 years.....	13
From 25 to 30 years.....	16
From 30 to 35 years.....	5
From 35 to 40 years.....	6
From 40 to 45 years.....	1
From 45 to 50 years.....	2
From 50 to 55 years.....	3
Sixty-five years.....	1
Total	61

As generally noted in such cases, nearly all of the infections occurred in the active period of life, there being thirty-three married and twenty-eight single per-

sons in the series. The result was that only too often the life partner was then affected with either a sore on the lips or on the genitalia. Thus, little Mabel S., aged 2 years, was infected in kissing, as I judged, by her uncle. The child was brought to the clinic having a generalized maculopapular syphilid. A careful examination revealed that one of her tonsils was very much swollen, indurated to external palpation and more or less ulcerated on its surface. Investigation of the family condition was made at once, and within a few weeks her father visited the clinic with a lesion in the same place, both being right tonsils, and having a generalized syphilid. He, undoubtedly, had contracted the disease from the baby, through kissing. The mother next called with a quarter-sized, typical hunterian lesion on the genitalia. At the time of her call, the mother was five or six months pregnant, and the baby, which was born later, was likewise infected. In other words, four

innocent persons were forced to suffer because of one uncured, careless syphilitic.

Primary lesions occurred on the lips in forty-three of the cases in the series; thirty-two of the lesions being on the lower and seven on the upper lip. The particular lip infected was not specified in the histories, found in old hospital records, of four cases. I found three chancres of the tonsil and one of the tongue, making the grand total of forty-seven lesions around the mouth, or 77 per cent. of the total number. This percentage is a little larger than that reported in the private cases of Bulkley, 63 per cent. In my series, also, I found ten primary lesions on the hand, four of them being on the thumb, three on the index finger, one at the base of the right little finger, one at the base of the right index finger

and one at an undetermined location on the right hand. There was one primary lesion on the neck behind the right ear, one on the left jaw, one on the abdomen and one which was a double infection of the nipples.

The manner of origin of a few of these cases seems to me to be deserving of mention in detail:

Infection occurred in connection with the teeth in five instances. Bites were responsible in four cases. Two men, who had lesions on their lips, said that they had been bitten by prostitutes. One woman credited a lesion on her lower lip to the bite of her male friend. Another woman (Case 47) blamed the bites of her lover for chancres on both nipples. The fifth (Case 26) occurred when the patient was in a drunken quarrel and struck his thumb on his opponent's teeth. The resulting cut refused to heal, and the man later appeared at the clinic with an indurated sore on his thumb, oblong, and the size of a pigeon's egg. A gen-

Fig. 1.—Chancre of nose. Note marked glandular reaction under left jaw, differentiating it from a gumma. Ptosis is congenital.

eralized papular syphilid was presented. The opponent, we later found, had mucous patches in his mouth.

Chancre of the lip by most authors is reported to be more common on the upper lip, although this was not true in our series. A cold sore was given as the cause in three cases.

A man (Case 20) was helping dig a ditch during the cold weather in January, and the company which employed him passed large pails of coffee among the men in order to keep

Fig. 2.—Chancre of thumb resulting from striking a man a blow on the teeth. Spirochetes present in lesion; generalized maculopapular eruption.

them warm. The result is hardly to be wondered at, considering the crowd of men who drank from the same pail. The patient had a marked papular syphilid; being a married man, his wife, of course, was also infected.

Case 5 is quite similar. A man drank whisky from a bottle, in common with several friends. His wife later visited the clinic with a sore similarly placed on the lower lip.

In Case 16, Mrs. P., a woman aged about 65, had a similar unfortunate experience. A drinking cup kept in her house was used by some women who were cleaning. The lesion on her lip, which was seen by me after four weeks, recalled to her mind the fact that one of the women she had employed had some cold sores on her lips. Fortunately, neither her husband nor her grandson contracted the disease.

Kissing was mentioned as the causal factor in nine other cases of the disease.

Miss M., a woman aged 18, was perhaps infected in this manner by a friend. However, she was employed as a clerk in a telegraph office, which fact suggests the possibility of her being infected by moistening her finger in turning over from 700 to 800 telegrams every day.

Of the remaining thirty-three chancres of the lip, in Case 51 a woman contracted it from her husband immediately after marriage. In Case 45 a man felt that he had been infected by a fellow laborer on a farm. In Case 53 the patient had a crack on the lower lip. In Case 57 the patient attributed it to a scratch on the lip.

In Case 60, in which there was a chancre of the tongue, a man could give no cause for the lesion, but confessed, as had the other patients with lip primaries, that he ate nearly all of his meals in restaurants.

In two of the tonsil cases, the circumstances have already been given. In the third case, the cause was unknown.

The barber shop was the only cause ascertainable in the case of a chancre on the neck. The patient said that he had received a cut on the neck; that from this cut was formed a sore which refused to heal. Local cauterization and different treatments, before coming to the clinic, had been without avail, the correct diagnosis having evidently not been made. The patient, on entrance, presented a generalized syphilid together with a raised lesion, dollar-size, showing a diffuse,

brawny induration and the floor of the ulcer covered with pus. Figure 3 shows the appearance of the man's neck clearly. Though a married man, his wife, fortunately, did not contract the disease. He afterward informed us that two other men, to his knowledge, had contracted similar sores in this barber shop. However, I never succeeded in getting track of them. The barber also removed his shop.

In Case 61, a man, aged 26, had a chancre on the lower jaw, for which he also blamed the barber shop that he patronized. He received a cut on the jaw, while being shaved. This cut, instead of healing, kept getting larger until he consulted a physician and, finally, a diagnosis of chancre of the jaw was arrived at—after the appearance of secondaries.

I have already spoken sufficiently of the chancres of the nipples. Before the days of the Wassermann test, this was very common in connection with wet-nursing, but it should now be a thing of the past in any well regulated clinic.

My one case of chancre of the abdomen is very interesting:

The babe was born in the Cleveland City Hospital about the middle of November, 1915, at which time the mother showed no evidence of syphilis and had a negative Wassermann. About Jan. 1, 1916, the mother brought the babe to our clinic because of an ulcer on the abdomen and of sores in the groins. Examination showed a large, almond-shaped, much indurated lesion in the right lower quadrant, with suppurating inguinal glands. No definite diagnosis was made at that time, but a weak mercury ointment was prescribed. The mother returned with the baby a week later, at which time she herself had generalized secondaries, and on this we diagnosed the child's condition as a primary infection of the abdomen. We made an examination for spirochetes but found none because of the mercury ointment used locally. The diagnosis was confirmed, however, by a generalized eruption which appeared several days later. The mother probably had been infected some little time before the child was born, and the babe, in passing through the vaginal tract, received an infection from the mother's primary lesion. The condition is rather unusual, as such cases generally have the seat of invasion on the cord.

Fig. 3.—Chancre back of right ear resulting from cut by barber. Spirochetes present in lesion; generalized maculosyphilid.

Ten cases of chancre of the hand were found in this series, and I feel that several of them deserve especial mention because of their unusual symptoms and circumstances.

Case 52 was a lesion of the thumb in a little girl aged 13 years. Outside of the fact that she had once used a common, hotel towel, no reason for the lesion could be advanced.

In Case 1 a man who had a characteristic chancre of the thumb, much like the one illustrated, blamed a pin prick for

his trouble. Just what significance a pin had, we could not determine, but he was a married man and no other cause could be ascertained.

In Case 27 the patient, who was a ship carpenter residing in a house of ill repute, had a chancre at the base of the dorsal side of the right little finger. A cut at this spot on his hand refused to heal. Later, secondary symptoms appeared on his body. As the cause of his trouble he blamed the towels and wash bowls in the house.

Fig. 4.—Chancre of nipples and generalized eruption, result of bites.

Case 53 was a primary lesion on the index finger of a negro porter who was accustomed to cleaning the urinals with bare hands. The result, in a public urinal where cotton, etc., is wont to accumulate, is not to be wondered at.

The remaining five of our cases of chancres on the hands were all in physicians. The first was Case 14, in which a chancre on the left thumb puzzled both Dr. John Phillips and me because no especial primary lesion could be found. The physician could only remember that he had a small crack on the thumb, at the junction of the skin with the external nail-fold. This neither increased in size nor did it pain him. It persisted, however, although he did not especially note it. About four weeks later, he began to be troubled with vague rheumatic pains, which were treated with acetylsalicylic acid (aspirin). A faint eruption began to appear after one week, but it was treated as an aspirin rash, since the doctor had no evidence of a primary lesion or of any lesions of the mouth. The eruption failed to clear, after the drug was stopped, however, and we finally made the diagnosis of secondary syphilis. The physician was married and had several children.

Case 23 was a typical, indurated, chestnut-sized lesion on the right index finger, together with an enlargement of the

Fig. 5.—Chancre of left nipple, same patient as Figure 4.

cubital and axillary glands. Just when the infection took place, the doctor was not sure, but he had several gynecologic cases under his care some time before and felt that he must have been infected then. The true condition, luckily, was made out before the appearance of other lesions.

Case 48 was an infection in an open wound at the base of the right index finger. The doctor was called to a bleeding parturient, and in the emergency was forced to remove the placenta manually, without gloves. The wound refused

to heal, notwithstanding the fact that after the emergency services exceptional care was taken in washing. Treatment was not instituted until the appearance of the secondary symptoms.

Case 49 was a lesion of the right index finger in a medical missionary. The doctor had operated without gloves. Later, a lesion appeared whose character was not suspected until the appearance of a macular eruption.

Case 54 was rather an irregular one, as we could find no primary infection, but felt that the seat of invasion must have been on the right hand because of the marked enlargement of the cubital gland. About Dec. 1, 1915, the doctor had been called in consultation for the purpose of removing the tonsils from a hospital patient. He found the patient in the operating room and, under a general anesthetic, cut out the tonsils, which showed nothing save redness and enlargement. Immediately after the operation, the sheet having been thrown back by the struggling patient, the doctor noted, and recognized as syphilis, an eruption on the patient. As he had not worn gloves, he scrubbed his hands with extra care, and then dismissed the case from his mind. Later I noted a generalized eruption, and by questioning the doctor, established the diagnosis of secondary syphilis.

Such is the history that only too often one gets with the syphilis of extragenital origin. Because of the location of the sore, or because it is atypical, no diagnosis is made until the appearance of the secondary symptoms.

Fig. 6.—Chancre of thumb in girl aged 13; cause unknown.

Late diagnoses occurred thirty-seven times in the series of sixty-one cases. The percentage, in comparison with that of others, is low, if anything.

Bulkley found that in all of his cases of chancres of the hand the patients had secondary symptoms before they consulted him. A physician gave him a history similar to one already given in this article. The doctor had a small sore on the side of his middle finger. It healed readily, but its true nature cropped out later, when the eruption appeared.

Jullien,² also, mentions a case in which there was merely a puncture of the pulp of the finger. This healed by first intention. The appearance of the secondary eruption was the first intimation of further trouble.

Considering these facts, it appears that the diagnosis of extragenital chancre is not always easy; that many times the unsuspecting patient will let it run along until other symptoms make him think that he has something serious. These considerations apply to chancres of the body in general, but to extragenital lesions in particular. One must always be on guard, therefore—witness my two cases and the ones reported by Bulkley and Jullien.

Lambkin found digital chancres generally very painful. This was true in several of my cases. Given any

2. Jullien: *Ann. d. dermat. et de syph.*, 1899, x; quoted by Shillitoe: *System of Syphilis*, d'Arcy. Powers & Murphy, 1, 258.

single sore on the body which tends to persist, to increase in size and induration, and to involve nearby lymph glands, one should always keep the chancre in mind. The typical lesion will be hard, will increase rapidly in size, and will show little or no ulceration and suppuration, but, on the contrary, it will show a building up of tissue. The draining glands, especially

Fig. 7.—Gumma of tongue; history of chancre on lip two years before.

those about the head, will be involved very early, and will show a peculiar boardlike hardness that is almost pathognomonic.

Ricord called attention to this long ago. He says that it depends on the rich lymphatic supply of the face. However, as can be readily shown from my series of chancres in medical men, the extragenital chancre is only too often a fleeting, atypical affair making the diagnosis very difficult.

In a differential diagnosis, one must keep especially in mind the gumma and the carcinoma. This applies in particular to the lip. During the past several years, I have treated three cases of gumma of the lips, two of them being gummas of the upper lip and one of the lower lip. The lesion in each case answered all of the physical requirements of primary lesion, except that the duration was a little long and there was no especial glandular involvement. One of them, I might add, was referred by another physician as a case of carcinoma.

Neither the gumma nor the carcinoma, however, has the acute inflammatory character of the chancre. Yet many a primary lesion and many a gumma, especially on the lip, have been excised as being malignant. I have seen two cases of this sort in the past six months.

In any case of doubt, an examination with the dark field illuminator, in an early sore, or together with a Wassermann reaction in an older one, will clear the diagnosis at once. A carefully taken history is also of great value.

I believe it to be the best rule that in any persistent sore, no matter how trivial and no matter what its location may be, the extragenital chancre should be ruled out in making a diagnosis. The prognosis of extragenital chancre, like that of all syphilis, provided proper and sufficient treatment is carried out, is good.

It has been noted by some writers that with primary lesions about the head, the infection is liable to be especially grave, often with an early involvement of the cerebrospinal system. I have not found this to be true in the patients coming regularly for treatment. The principal task has been to make them come regularly. Despite the warnings and the printed directions, four of the patients have been seen only once, three of them having had primary lesions on the lip and one a chancre on the thumb. Two patients absolutely refused to take any treatment, and I have lost sight of them. This was some time ago. If they had been lost sight of in the past two years, I should have notified the department of health and had them transferred to the detention ward at the City Hospital.

One patient came only three times; six, only two times; two, four times; one, seven times; one, nine times; two, ten times; two, eleven times; one, thirty-four times; two, thirty times; one, thirty-five times, and one, thirty-six times.

Twenty-nine of the total number are still taking treatment, very regularly, in most cases. Twelve of my private cases are helping to swell this total.

Attendance cards are now being used. We send postals and employ the social service department in visiting the patients. We note that there is considerable improvement in the matter of attendance.

About 50 per cent. of these patients are now taking regular treatment for their ailment. This is a very important matter, since too many of them are an especial menace to society.

In the series of sixty-one extragenital chancres, one babe infected her father and he, in turn, infected the mother and her unborn child. Two men, who had lesions on their lips, infected their wives. A babe aged

Fig. 8.—Chancre of lip, contracted from husband.

19 months transplanted its lip lesion to the lip of the mother, who, in turn, transmitted the disease to her husband.

These are the only authentic secondary infections in the series, but, no doubt, many others took place.

The prophylaxis of syphilis, in other words, is one of the most important problems before the medical profession today.

Many of the cases were due to the use of the drinking cup. Yet we may still see it in many of our large stores and manufactories and even in some of our hospitals. How many of us have been served with unclean silverware and dishes in restaurants and at soda fountains?

There should be stringent laws, enforced by careful inspection, requiring the placing of all dishes, glassware and silverware in boiling water for the space of five minutes, even if the microscopic dust be not removed. This would effectually kill all organisms and fully protect us.

Two of our patients contracted syphilis in the barber shop. Too frequently we find barbers using towels over and over again. They are often used twice in some of the most pretentious shops. Would it not be well to require frequent sterilization of razors and brushes with alcohol? No barber shop thinks itself complete without the alum and silver nitrate stick, despite laws prohibiting their use.

Closer supervision of the public towels and soap also would serve to lessen the extragenital infections with syphilis. Moreover, any patients in a dangerous condition, whether they be in families or in the public service, and especially the latter, should be removed to a hospital for a sufficient length of time, in order to remove the most glaring cutaneous lesions, whether of the mouth or of the integument.

Such is the routine now being carried out by us in connection with the venereal ward at the Cleveland City Hospital. Generally, two or three weeks entirely suffice, the patient in that time receiving three injections of salvarsan and as much mercury as he will tolerate. After this course of treatment, patients return to the Lakeside Hospital clinic for follow-up treatment. In our series of ten chancres on the hands, five of them, as already noted, were in physicians. In Bulkley's series of fifteen chancres of the hand, ten were in medical men.

Montgomery³ reported seven cases, six of them being on the hands. Nine out of twenty cases reported by Brandis⁴ and Morrow,⁵ each reporting ten cases, are quoted by Dr. Montgomery as having been contracted while on gynecologic or obstetric cases.

Fournier⁶ reports a series of forty-nine extragenital chancres, thirty of them having been in physicians.

Often the question is raised about the acquisition of syphilis from the cadaver. Two such cases have been reported by Taylor.⁷ One case was acquired from a body eight hours postmortem, the other from a body dead nine hours. Morrow, also, has published an account of one such case.

Only too often is the physician an innocent victim of the extragenital chancre, and he cannot use too much care in the examination of his patients. All patients should be suspected of syphilis. In that way, only, safety lies.

No physician should make a vaginal, an oral or a rectal examination without gloves. The doctor who operates without them places himself in the greatest danger. In my experience, nose and throat men are especially prone to take chances. Plenty of chances, too, are taken by dentists, nurses and midwives in their work.

I wish to emphasize the importance of an early diagnosis, and to recommend the use of the heaviest possible treatment for a long period of time.

The profession, as well as the public, must be educated as to the gravity of the disease, and our syphilitics should have proper instruction in regard to their daily walk of life and as to the importance of treatment. Moreover, our medical schools should give more time, in their curriculums, to the diagnosis and handling of early syphilis, since at this time the best results can be obtained.

Stringent supervision of our barber shops, of our restaurants, hotels and soda fountains, of our drinking cups, etc., I believe, would also assist in preventing so many innocent victims of syphilis.

Fig. 9.—Chancre of lip, contracted from farm hand through drinking utensils. Note edema.

7. Taylor, R. W.: *Jour. Cutan. Dis.*, 1890, viii, 201.

New Physiology.—Medicine needs a new physiology which will teach what health really means, and how it is maintained under the ordinarily varying conditions of environment. We also need a pathology which will teach how health tends to reassert itself under totally abnormal conditions, and a pharmacology which will teach us, not merely the "actions" of drugs, but how drugs can be used rationally to aid the body in the maintenance and reestablishment of health. The new physiology, new pathology, and new pharmacology are growing up around us just now. I can see them more particularly in the splendid advances which the medical and other biologic sciences are making in American. You have the advantage of having less of old intellectual machinery to scrap than we have in the old countries; but perhaps we shall not be much behindhand.—J. S. Haldane: *The New Physiology*, *Science*, Nov. 3, 1916.

3. Montgomery, D. W.: *The Acquisition of Syphilis Professionally by Medical Men*, *Jour. Cutan. Dis.*, 1905, xxiii, 145.

4. Brandis: *Deutsch. med. Wchnschr.*, 1898, xxiv, 329.

5. Morrow, P. A.: *Jour. Cutan. Dis.*, 1896, xiv, 125.

6. Fournier, A.: *Les chancres extra-génitiaux*, pp. 447-450, reported by Montgomery (Footnote 3).