reported a case of chronic syphilitic meningitis forty-three years after infection.

Charcot, Fournier, and Hutchinson have considered that clinically mercury and iodides are of value in checking these parasymphilitic lesions, and in accordance with the practice of the last authority the patient in this case has been put on 1 grain of mercury twice daily in the form of Hutchinson's pill, and is advised to continue this treatment for twelve months, the iodides being contraindicated by the pulmonary lesion.

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ON EXTRAGENITAL SYPHILITIC INFECTION.

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THOUGH syphilis is acquired in nearly all cases in the course of sexual intercourse, or is present congenitally, one meets every now and then with patients in whom the usual mode of infection is doubtful, or is denied and cannot be proved.

This paper deals with cases of syphilis insontium, the syphilis of the blameless, where we can exclude venereal infection with great probability, or even certainty. In practice and hospital work I have met with several cases in which men and women, living with infected individuals, have developed in the course of sexual connexion primary sores on various parts of the body surface—for example, the abdomen (1 case at the Seamen's Hospital), shoulders (1 case mentioned by Mr. Turner), lips (2 cases—1 at Würzburg, 1 at the Seamen's Hospital), eyelids (2 cases mentioned to me by Dr. Wilfrid Fox, and 1 seen by myself whilst a student), tongue (1 at the Seamen's Hospital), etc. These cases I exclude from consideration in this paper.

To show the importance of small abrasions or wounds in the skin in relation to infection with a syphilitic virus, I may mention a case observed by Professor Müller at Zürich a few years ago. A blacksmith went for a walk with a factory girl in the woods. On the way he was stung on the index finger of his right hand by a wasp. Shortly afterwards he had connexion with the girl, and a primary sore appeared on his finger but none on his penis. This is, however, a case of extragenital but not of extravenereal infection. I want to call attention to the fact that people leading blameless lives may be unfortunate enough to contract a perfectly avoidable disease, which, taking into consideration its long-lasting and intense effects, is one of the most important that the medical man has to deal with.

A discussion on the subject would have been almost useless a short time ago, for we knew next to nothing of the active cause. We now know for certain that the etiological organism is a spiral body, very probably of parasitic or protozoic nature. It has been repeatedly grown in pure culture in the cornea of the rabbit, after an incubation of from five to seven weeks. I may mention the names of Tomaszewski, Bertarelli, Schuch, Neisser, Greef and Clausen, Kraus and Volk, von Benedek, Mühlens, and E. Hoffmann, as among those who have succeeded in obtaining cultures. After having passed through the cornea of several rabbits, it has still been possible to infect monkeys, to produce in them hard sores at the site of inoculation, and to find again in the resultant secondary manifestations the spirochaetes in pure culture. All the necessary postulates to prove the etiological relation of an organism to a disease have been fulfilled. Also the spirochaete, or in the newer nomenclature *Treponema pallidum*, has never been found in any but cases clinically showing themselves to be syphilis, if we make exception

of the tropical disease yaws or framboesia, in which a similar organism has been detected by Castellani. We have now, therefore, the opportunity of making a definite diagnosis in all doubtful cases.

I shall not take into consideration the commonest instances of syphilis insontium—namely, the infection of medical men in the course of their practice. They are very frequent indeed, and, though much to be deplored, not much can be done to eliminate them from the bounds of possibility. They are among the necessary risks of the profession. In many cases the disease was not recognized, and in others the medical man endangered himself and others by neglect of the necessary precautions. Lessar published lately 5 cases of syphilis in medical men, all acquired in the course of practice. Three did not diagnose the disease in themselves, and only remembered having had whitlows on their fingers, which took a very long time in healing. Under such circumstances we must not be astonished to find no history of syphilis in many cases of general paralysis of the insane, a disease which, from its clinical, pathological, and histological appearances, I believe to be always of syphilitic origin.

CASE I.

The first case of extravenereal syphilis that came to my notice was in Genoa. An illegitimate child had been entrusted to a foster-mother in the mountains near Genoa; this child was brought to me with a sore on its left tonsil, and hard glands on the corresponding side of the neck. Doubts as to the nature of the disease were set at rest by the appearance of a typical rash by the time that the child was brought for a second examination. The foster-mother had papules on her pharynx. Her husband had been to town to deal in cattle, and during his stay there had infected himself and then had infected his wife. The woman had the habit of tasting every spoonful of food before giving it to the infant, and probably with the contaminated spoon had wounded the left tonsil of the child, which, during the process of feeding, she held on her left arm; this, however, is mere hypothesis. Mercurial inunctions soon brought the disease to a standstill in man, woman, and child.

CASE II.

The second case I met with was in Switzerland. A lady, engaged to a young man of my acquaintance, asked my advice about a sore on her lower lip. I sent her to a specialist, who diagnosed ulcer lueticum, and prescribed mercurial treatment by the mouth. It fell to my lot to tell her fiancé the nature of the complaint, and that his marriage would have to be postponed for at least two years. He had no visible signs of specific disease, and denied that he had ever had any venereal disease except gonorrhoea, but admitted that he had been with a prostitute about four weeks before, and that within half an hour he had visited his fiancée and had kissed her. At the time I considered it probable that the syphilitic germ had been carried from the prostitute to the patient without the carrier being affected. I am now rather sceptical about this mode of infection, but am persuaded that the infection took place extravenereally, and simply refer to it as a case of this kind.

CASE III.

It has fallen to my lot to help to diagnose the third case recently in London. A tailor, a foreigner, married about eight years, had a healthy wife and two healthy children. In November, 1906, he helped to eject a drunken man from a public-house, and during the struggle the man, who appears to have had a number of red spots on his forehead (corona veneris?), bit him on the little finger of the left hand. The wound rapidly swelled, and refused to heal in spite of medical treatment. In February, 1907, the patient noticed for the first time that a number of red spots had made their appearance on his chest; the spots increased rapidly in number and size. On examination he was found to be suffering from a slight angina, and to be covered with maculo-papular specific exanthem. There was no primary sore on his genitals. On the second phalanx of the little finger of the left hand there was a red, infiltrated, indolent, hard, circular sore, well-developed orbital glands on the right side, and also glands in the axilla. On the left side no glands could be detected with any certainty. All symptoms disappeared rapidly under vigorous treatment with mercurial ointment.

To these 3 cases I can add 2 doubtful cases where direct proof of extravenereal infection is wanting:

1. A Portuguese gentleman whilst dancing with a girl rubbed his forehead several times on hers. He noticed later that her forehead had a number of curious spots on it. He developed a primary sore on his temple. No primary sore could be detected elsewhere. The patient denied cohabitation, and the sore appeared three weeks after the dance. I had occasion to treat him some time after, and saw the typical scar on his forehead.

2. A butcher was sent to the out-patient department of the Seamen's Hospital for a persistent whitlow on his thumb that

refused to heal. A diagnosis of primary chancre was made, and was afterwards borne out by the appearance of a secondary rash and by the fact that under mercurial treatment the whole thing rapidly subsided.

The treponema seems to have a special predilection for the connective tissue directly under the epithelial cells. This explains, I believe, why the inunction method is the most efficacious in the treatment of secondary eruptions. The mercury gets straight and undiluted to the noxious organisms, and must pass amongst them before getting to the lymph stream. The effect on the spirochaetes was brought forcibly to my notice lately when I fruitlessly examined 33 patients suffering from syphilis for the spirochaete after one or two weeks' treatment with inunctions, whilst in untreated papules they could be demonstrated quite easily.

I have endeavoured to point out the danger to the community at large of the syphilitic patient in its midst, for I am convinced that such cases are relatively frequent. Can no regulations be framed to minimize this danger?

MEMORANDA:

MEDICAL, SURGICAL, OBSTETRICAL.

THE LOCAL TREATMENT OF DIPHTHERIA.

A CASE of diphtheria recently under my care demonstrates the value of local treatment so well that I am tempted to publish the remedy used. I was called to see a child on January 5th, 1908, and found it was suffering from diphtheria. There were considerable patches of membrane on both tonsils. The face was pale and puffy, there was a little albumen in the urine, and the pulse was soft. I ordered the following paint to be used every two hours, telling the mother the object was to kill the germs in the throat:

R. Liq. hydrarg. perchlor. ... 3j.
Glycerini acidi tannici ... 3j. M.

The mother, in her anxiety to get the child well and back to fulfil an engagement at a theatre, actually painted the throat every hour, and in thirty-six hours all trace of membrane had disappeared, and the child seemed well again, except that she was weak and anaemic. Indeed, the mother thought the diagnosis was wrong, as she could not imagine that a diphtheritic throat could be cleared in such a short space of time. The paint was continued for several days, at longer intervals, and then stopped, and an iron tonic prescribed.

On January 20th a bacteriological examination was made, and the bacillus of diphtheria was found. The paint had been stopped too soon. For many years I have used this paint, ordering it to be applied every two hours, unless during sleep, and have found it only fail on one occasion to clear up the throat, when I used antitoxic serum. The strength of the paint is 1 in 2,000 of the perchloride of mercury; the glycerine of tannin gives body to the application, and is a useful astringent. The practical lesson seems to me to be, paint hourly, day and night, until membrane is gone, then continue the application at suitable intervals for a week or longer, or until the swab test is negative.

Glasgow.

J. T. MACLACHLAN, M.D. Glas.

INHERITED SYPHILIS.

In his interesting and instructive paper on inherited syphilis, published in the BRITISH MEDICAL JOURNAL of February 1st, Mr. Clement Lucas states that it is the separation of the placenta at birth which allows the infection to take place through the umbilical vein.

That infection before birth can occur is, however, proved by the following case, which occurred in my practice some three years ago. I attended a young married woman at her first confinement, which was at full time. The child was well developed and showed no abnormality, except that it was covered by a profuse syphilitic rash. It lived until the seventh day, when the cord separated and free haemorrhage from the umbilicus took place. In spite of all treatment the bleeding continued, and the child died six hours after the commencement of the haemorrhage. The mother came of a healthy family and never had any signs of syphilis. On interrogating the husband he admitted having suffered from syphilis a year before marriage, but declared that for six months before his wedding he had been quite free from all signs of that disease.

South Shields.

JOHN BAIN.

THE WORK OF A HOSPITAL PATHOLOGICAL DEPARTMENT.

THE following is a summary of the work of the Stephen Ball Memorial Pathological Department of the Sussex County Hospital, Brighton, by F. G. Bushnell, M.D., D.P.H., and A. W. Anderson, M.B. From July, 1904, to January 31st, 1908, 2,447 examinations were made of specimens received from the hospital. Of these 1,965 were made previously to August 31st, 1907, and 482 from that date to January 31st, 1908.

	ANALYSIS		
	July, 1904, to Jan. 31, 1908.	July, 1904, to Aug. 31, 1907.	Aug. 31, 1907, to Jan. 31, 1908
1. Histological ...	931	764	177
2. Chemical ...	140	120	20
3. Bacteriological ...	893	707	186
4. Microscopical ...	483	384	99
	2,447	1,965	482

1. Histological Examinations.

Sections of "scrapings," tissues, new growths ...	662
Blood examinations ...	180
Effusions for "cell diagnosis" ...	20
Miscellaneous ...	69
	931

2. Chemical Examinations.

Test meals and gastric contents ...	41
Urines ...	68
Exudates, transudates, cerebro-spinal fluid, milk, water, faeces ...	31
	140

3. Bacteriological Examinations.

a. Swabs and rubbings from the throat and nose ...	65
b. Sputum ...	368
c. Serum reaction (Widal) ...	79
d. Inflammatory products ...	210
e. Blood ...	55
f. Urine ...	86
g. Miscellaneous ...	32
	893

a. In 12 of these swabs diphtheria bacilli were identified.

b. In 72 tubercle bacilli were present.

c. Twenty "positive" serum diagnoses were made.

e. *Streptococcus pyogenes*, *Staphylococcus albus*, *Staphylococcus aureus*, and on a few occasions the *B. typhosus* were isolated from the blood; and the malaria parasite was observed.

f. Tubercle and acid-fast bacilli were found in 11 specimens of urine; also *B. coli communis*, *Staphylococcus albus*, and streptococci and diphtheroid bacilli.

g. Tubercle and acid-fast bacilli were found in pleural effusions and the cerebro-spinal fluid, and typhoid bacilli were recovered from the dejecta of a typhoid patient and from the gall.

From January, 1906, to August 31, 1907, 2,291 media tubes were inoculated, and 675 from August 31st, 1907, to January 31st, 1908, or 2,966 in all.

4. Microscopic Examinations

These 483 examinations were of hair, urine, etc. Among the findings were the *Spirochaeta pallida*, the ova of *Bilharzia haematobia*, echinococcus cysts, and microsporion. *B. tuberculosis* was identified in the dejecta.

5. Opsonic Indices.

Up to August, 1907, the opsonic indices of about 100 cases had been repeatedly calculated; 38 from that date to January, 1908, and 7 bacterial vaccines prepared. This treatment of staphylococcal infections, especially if subacute or chronic, is hopeful. An attempt to treat the form of anaemia, known as "pernicious," by this method is being carried out by this department.

6. Post-mortem Department.

During the six months this department has become a part of the Ball Laboratories, 70 autopsies have been made, and the necessary bacteriological and histological procedures connected therewith carried out. The average yearly number of such examinations is 150.

7. In the private pathological practice 534 examinations were made up to January, 1908.

8. Some thirty original contributions have been made to medical literature by research workers in these laboratories since their foundation.

Specimens, slides, etc., are preserved for purposes of reference and research in the future; the card-index system of recording specimens and a research or reference library is being introduced.

Mr A. W. Anderson is proceeding shortly to Hamburg to demonstrate the technique of opsonic determination in the laboratory of Professor Unna.