The chart shows marked impairment over the radius and ulna of both arms, there being very little difference between the two sides. The legs are affected to a slight extent, although there was no other evidence that they were affected.

CASE III.—*Traumatic Ulnar Neuritis.*

Female, aged 34. The chart shows that her power of appreciating the vibrations was five-eighths of the normal over the right ulna.

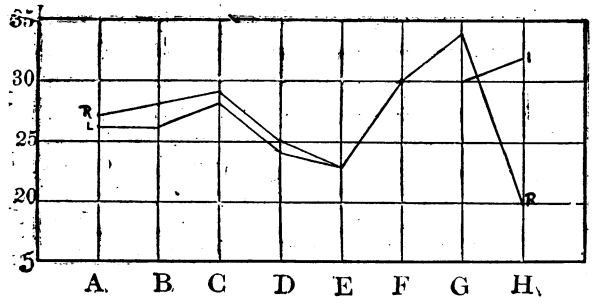

Fig. 3.—Case III. A, Internal malleolus; B, external malleolus; C, tibia; D, anterior superior spine; E, sacrum; F, sternum; G, radius; H, ulna.

CASE IV.—*Tabes.*

Male, aged 54, with the signs of a typical tabetic. The vibratory sense is markedly impaired from the sacrum downwards, while the sternum, radius, and ulna are approximately normal.

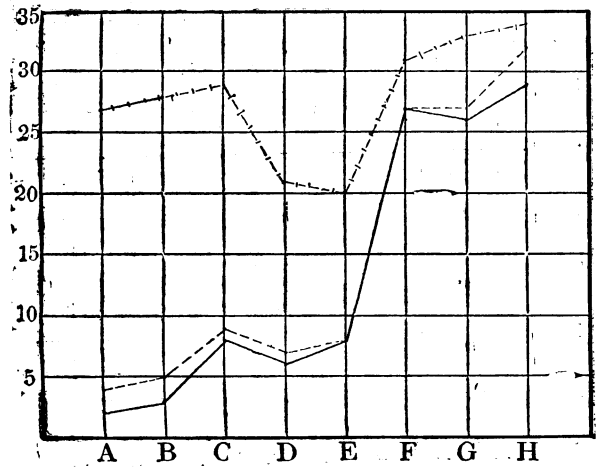

Fig. 4.—Case IV. A, Internal malleolus; B, external malleolus; C, tibia; D, anterior superior spine; E, sacrum; F, sternum; G, radius; H, ulna. — | — | — | — Average normal; ——— right side; — — — — left side.

CASE V.—*Disseminated Sclerosis.*

The chart shows a lesion of a different type to that of the tabetic (Case IV). The impairment of the vibratory sensation is more disseminated, and involves chiefly the right arm and left leg, while the sacrum is normal.

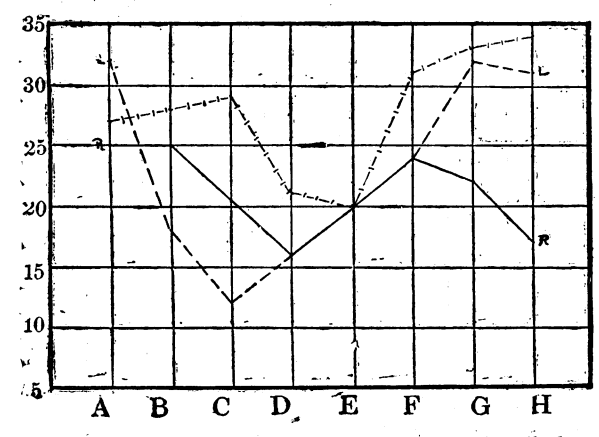

Fig. 5.—Case V. A, Internal malleolus; B, external malleolus; C, tibia; D, anterior superior spine; E, sacrum; F, sternum; G, radius; H, ulna. — | — | — | — Average normal; ——— right side: — — — — left side.

CASE VI.—*Spinal Syphilis.*

Male, aged 28. The chart is of the same type as that of the case of disseminated sclerosis, but there is more marked involvement of the vibratory sensation.

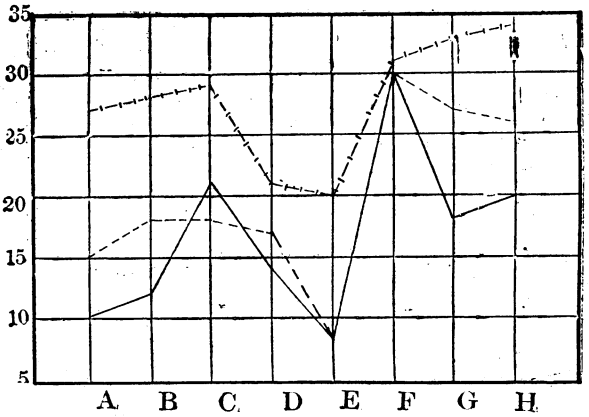

Fig. 6.—Case VI. A, Internal malleolus; B, external malleolus; C, tibia; D, anterior superior spine; E, sacrum; F, sternum; G, radius; H, ulna. — | — | — | — Average normal; ——— right side; — — — — left side.

In this paper I have not attempted to discuss in detail the types of curves peculiar to any special disease of the central nervous system, but merely to describe a test by which slight impairment of the vibratory sensation can be recognized. Of its value in the early recognition of organic nervous disease and in the diagnosis between different diseases I hope to bring evidence in a later paper.

I wish to thank Dr. A. F. Hertz, Physician in Charge of the Neurological Department at Guy's Hospital, for his kindness in allowing me to examine the cases under his care.

THE CURATIVE VALUE OF LEISHMANIA CULTURE "VACCINE" IN ORIENTAL SORE.

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Preliminary Note.

THE chronic and obstinate nature of the Oriental sore in general and of the Cambay ulcer in particular is well recognized by all clinicians. The number of remedies and the variety of drugs which have been put forward from time to time as "specifics" for this disease, as also the scanty references on the treatment of this disease in text-books, may be taken as a fair index of the unsatisfactory nature of the therapeutics of this disease. In Cambay, the home of this disease on this side of India, all remedies, both internal and local, have lost repute to such an extent that people take the disease as one to which they have to submit as a matter of course (so long as their lot is cast in Cambay) until merciful Nature brings about a healing in her own time, this being, as a rule, anything between six to eighteen months, or even longer.

In these circumstances it has not been possible in Cambay to test the value of drastic measures (such as curetting of the lesions with sharp spoons and salting the surface so freshened with powdered potassium permanganate), as recommended by Nicolle[1] and Benoit Gonin.[2] Nor has it been possible to persuade patients in Cambay to submit to arsenobenzol injections for what is, after all, a benign malady. The only treatment which can be safely undertaken without the risk of scaring away the patients has until now consisted in the application of some non-irritating antiseptic oil or unguent. And of all these I may here record the efficacy of salol dissolved in olive oil. Salol dissolves easily in olive oil, over 1 drachm dissolving in 1 ounce of the oil. The oil, when rubbed into the skin, is well absorbed and it penetrates the tissues, and has probably some antagonistic action on the parasite without causing the least irritation. I have obtained very good results by applying the oil in the shape of a compress over the lesion before or after ulceration, and, except in those cases in which the ulcers have been already deep at the commencement of the treatment, the result is so satis-

No.	Date.	Name and Age.	Nature of Lesion.	Description of Lesions.	Duration.	Date and Dose of Vaccination.	Constitutional Disturbance.	Observation the Day after Vaccination and Week after Week.
1	Oct. 8, 1911	S. M., aged 20	Ulceration	Three ulcerating sores on both malleoli right foot and inner malleolus left foot. Ulcers covered with unhealthy granulations and foul discharge; margins well defined; base fixed; surrounding tissues congested; size, halfpenny	3 months	Oct. 8, 1911, 0.125 c.cm. Oct. 15, 1911, 0.25 c.cm.	Rise of temperature, 100° for 3 hours in the evening Nil	Patient showed signs of healthy granulation. Ulcers rapidly healed one week after second injection. Scars well defined after 3 weeks.
2	Oct. 11, 1911	R. P., aged 8	Papule	Early lesion; left cheek about the size of farthing, raised from surface; bright purple colour; surface covered with scales; induration of surrounding tissue fairly marked	2 months	Oct. 11, 1911, 0.125 c.cm.	Nil	Healed with hardly any scar. Spot made out after 4 weeks as a purple mark. Healing 2 weeks.
3	Oct. 13, 1911	N. K., aged 21	Papule	Raised from surface; covered with scales; margin not well defined; surrounding tissue indurated; base not fixed; size farthing, on the back left side.	20 days	Oct. 13, 1911, 0.125 c.cm. Oct. 19, 1911, 0.25 c.cm.	Nil Temperature 100.6° for 6 hours in the evening	Nil next day; 8 days after first injection shows signs of healing; size smaller. Ten days after second injection spot completely flush with skin; cured in 20 days.

factory that after the healing not a trace of the disease is left. The chief drawback in all the cases so treated has been the slow nature of the healing process, two to three months being the usual period during which the lesions have to be attended to carefully from day to day.

In a cutaneous inflammation of a low type such as is seen in Oriental sore the chronicity of the disease may find an explanation in the hypothesis that the parasites in the lesion flourish long, because they do not come into intimate contact with an antibody sufficient in quantity or efficient in quality in the blood serum supplying the part, just as Wright[3] and Leishman[4] have taught as taking place in acne. It is in such a disease as the Oriental sore, where one obtains as a rule a life immunity after one attack, that one would naturally appeal to a suitable specific "vaccine" with the hope of a beneficial result.

[In this connexion it may be of interest to note the facts recorded by Nicolle[5] as to the immunity to a living virus conferred by a previous inoculation with a dead culture of the parasite of Oriental sore. Thus, of the two persons, one received, to begin with, an inoculation of a dead culture, a year later an injection with a live culture, and three months later still an infection with a live virus from the sore in a monkey, while the other underwent only the last two operations without the first. Of these two persons the first developed no lesion, while the other developed two lesions at the seat of injection with the live culture, and another lesion at the seat of infection with the live virus. I may also take this opportunity to record the protection conferred by kala-azar infection to infection by the Cambay sore parasite. Thus two cases of kala-azar under the care of Colonel C. Donovan, I.M.S., in Madras, were infected with the virus from the lesion in a monkey (original source human, from Cambay). Of these neither developed any sore, while as a control the virus was efficient to produce a typical sore in a fresh monkey infected at the same time. I desire to express my best thanks to Colonel Donovan for allowing me to do the infection and for observing the effects himself in 1910, and also for his kindness and courtesy ever since.]

It is with the object of hastening the process of healing—in other words, of stimulating the mechanism of immunity production—that it was thought desirable to attempt to make a curative "vaccine," much on the same principle as Wright's staphylococcic vaccine in furunculosis. For this purpose massive cultures were obtained in Nicolle-Novy-McNeal medium from the *Leishmania tropica* from an experimental lesion in a *Macacus sinicus*, the original source of the virus being that from a Cambay case obtained early in 1910. When the cultures were at their best—namely, on the seventh day—the fluid, rich in flagellates, was collected and suitably sterilized with glycerine. This is the "vaccine" which has been tried by subcutaneous injection in 3 typical cases of Cambay sores of different ages with a tentative dose corresponding to 0.125 c.cm. of the original culture.

As this dose produced no constitutional or local reaction, a second injection of a double dose was given in 2 of the 3 cases. The rapid way in which the lesions (both ulcerating and non-ulcerating) healed (in about fifteen days) may be a justification for this short preliminary note. The results of these 3 cases are given in the accompanying table from the notes of Dr. Jamietram Vyas, of Cambay, who kindly undertook to treat the cases on the lines indicated above, and to whom I owe my best thanks. A bigger experiment is now in progress, and the results will be published at the earliest opportunity.

From the foregoing I may conclude:

1. 0.25 c.cm. of the "vaccine," and even more, can easily be borne by the patients.

2. There is hardly any constitutional disturbance beyond the rise of temperature sometimes, and that, too, not more than 100.6° for a few hours.

3. The only local effect (in the sore) noticed is a slight itching on the second day of treatment.

4. The healing is uninterrupted and rapid, and this may be roughly put down as about two weeks.

5. Non-ulcerating sores heal without any cicatrix or pigment, while the ulcerating sores leave behind a well-defined shallow depression of uniform depth.

Before concluding I may point out that an attempt is being made to extend the same principle of treatment in a case of kala-azar in Bombay—thanks to the kindness of Colonel C. H. L. Meyer, I.M.S.—from an auto-vaccine prepared out of the patient's own parasite, but with what ultimate result it is difficult to say at present. The result of this and other cases treated similarly will be published in due course.

REFERENCES.

[1] Ch. Nicolle. *Archives de l'Institut Pasteur*, Tunis, 1908. [2] Benoit Gonin, *Bulletin de la Société de Pathologie Exotique*, 1911, p. 182. [3] Wright, *Lancet*, March 29th, 1902. [4] Leishman, BRITISH MEDICAL JOURNAL, January 11th, 1902. [5] Ch. Nicolle, *Annales de l'Institut Pasteur*, Paris, 1910, p. 673; and *Bulletin de la Société de Pathologie Exotique*, 1911, No. 3.

M. WŒSTE, leader of the Right in the Belgian Chamber, has introduced a bill supplementing Article 353 of the Penal Code, by punishing all doctors, midwives, or pharmacists, who recommend means of procuring abortion, with imprisonment for one to three years. Moreover, the bill imposes a penalty of imprisonment for six months to three years, together with a fine of from £8 to £120, on any one who either by speeches in public places, or by the sale, or offer for sale even in private, the exposition, advertisement or distribution of written or printed matter, or illustrations of means, instrumental or other, incites to action which may tend to produce abortion, whether such effect has actually followed or not.

WE learn from the *Berliner klinische Wochenschrift* that the number of medical women practising in Germany and of female students studying medicine in the universities has increased with surprising rapidity during the past few years. It was estimated that scarcely more than a round dozen women practitioners were following their profession in the Fatherland in 1900, most of whom had qualified in the Swiss universities. This number increased to 50 in 1908, and to over 100 in 1910. In the same way the number of women medical students at the German universities has increased. In the winter session of 1909–10 there were 371, in the summer session of 1910 525, and in the following winter session there were as many as 557. Berlin University claims 159 of the last-mentioned number.