

that if a question is put to her in a loud tone, she repeats the question, but if addressed in a normal manner she replies rationally. With the exception of this imitativeness and state of hyper-acute suggestibility she has been classified as sane since 1930, but she is a woman of unstable temperament, easily irritable, quarrelsome and erotic.

Physical signs.—Nothing other than general hyperaesthesia and exaggerated tendon reflexes.

Case 2.—A Burman, male, aged about 60, was admitted for observation as to his mental condition on the 18th September, 1938, as he had killed another man without any motive, the circumstances leading up to the murder were as follows:—

This old man, the accused, was travelling from one village to another and at dusk arrived at a rest house to spend the night. A servant in the rest house, who was a complete stranger to him, gave him a block of wood for use as pillow and whilst doing so he dropped it on the ground at a distance of two or three feet from the accused. On hearing the noise, the accused picked up the block of wood and threw it at the servant's head, who thereby sustained cranial injuries as a result of which he died.

The defence maintained that this old man was in the habit of imitating all actions that were performed in his presence, and that he had been subject to this abnormal condition for the last seven or eight years, and it was stated to have occurred suddenly as a result of shock and worry over the death of several members of his family.

On examination, he looked older than his stated age but was in fairly good health and of good physique. The only abnormal physical signs elicited were slight tremors of the tongue and fingers, pupils equal and regular but sluggish to light and reacted to accommodation; exaggerated knee jerks.

Blood Wassermann ++; C. S. F. Wassermann negative; cell count 10 per c.mm.; Lange's test 1122100000 (a luetic curve).

He displayed the following peculiarities: If he were struck, tickled or in any way interfered with, he suddenly and spontaneously struck at any one who was nearest to him; if anything were thrown at him, a ball, stone or a match box, he immediately picked it up and threw it at whoever was nearest to him.

On one occasion in the jail before his admission, to test his reactions he was put to watch a flogging from inside a room with bars; he became very excited, picked up a stick and beat the iron bars forcibly and also endeavoured to hurl the stick at the bars. On another occasion, before he committed the crime it was stated that he was watching a man swimming when he fell on the ground and began to make swimming movements on the sand.

The patient whilst under observation was otherwise normal in behaviour; he ate and slept well, answered questions rationally, was correctly orientated but rather dull; he did not appear to appreciate the seriousness of the charge against him and, what is unusual in these people, he was not sensitive about his imitativeness and in fact seemed to regard it in the nature of a joke. As he is suffering from cerebral-syphilis as well this may be the explanation.

He is under trial at present and his case has not yet come up to the Sessions Court, so that it is not known whether *young-dah-hie* has been accepted in his defence to gain him an acquittal, but it must be realized that his positive Wassermann reaction and abnormal Langes test should alone carry considerable weight in his favour.*

* I have now received information that the man has been sentenced to six months' rigorous imprisonment, charged under section 304 I. P. C. (culpable homicide not amounting to murder). I have not yet received a copy of the judgment and I am therefore unable to say the grounds on which the magistrate sentenced him and why he was given such a short term of imprisonment.

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VITAMIN C AND OVULATION

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DURING the course of certain investigations on vitamin C in its relation to corpus luteum, I tested the urine of women on various days of

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Case 3.—A Burmese woman, aged about 30, is an *ayah* in this hospital. Her condition of imitativeness and suggestibility was observed accidentally. She states that this condition developed about five years previously, after child-birth. She is said to have been frightened by a severe thunderstorm when she was pregnant and became very nervous after this.

Her mental condition is normal. In a similar manner to case 1 she imitates actions performed in front of her, repeats questions addressed to her unexpectedly, and shouts and abuses when she is in any way suddenly stimulated.

She is very sensitive about her condition and if I touch her unawares she shouts out an obscene expression, but, having realized what she has done, she is shame-faced and retreats from view.

Case 4.—A Burmese cultivator, aged 30, was admitted to this hospital on the 4th August, 1937, as a criminal patient who had assaulted one of his servants with a *dah* as a result of which he sustained serious injuries. No provocation or motive was elicited and for his defence a plea of insanity was successful. There is no previous history of insanity in his case, nor is there a family history. There is no history of drink or drugs, but he is stated to have had fever of unknown origin for about two months previous to the crime. He has been sane since admission, quiet and well behaved, hard working and reliable.

It was observed by accident that he was a very nervous individual. He is startled by any slight stimulus, *e.g.*, if he is tickled, he shouts out and jumps as though he has been violently stimulated or has sustained a great fright; a noise or shout from behind causes him to react in a similar manner. He does not show echolalia or echopraxia, nor does he strike out as do the other cases but there is no doubt that he is an example of type II.

I have noticed that although he knows that there is a man behind him he will go on repeatedly shouting out a word of abuse and jumping whenever he is touched.

Summary

1. An unusual neurosis occurring in Burma is described and divided into two types.
2. The relationship of type I to other conditions occurring for the most part in Mongolian races and in particular to Malayan, *latah*, is stressed, and that of type II to the convulsive tics.
3. Four cases are described in detail and the importance of the medico-legal complications which may arise is well shown in the description of case 2 who stood his trial in the lower court on a charge of murder, but the charge was changed to culpable homicide not amounting to murder in the Sessions Court and the patient sentenced to six months' imprisonment.

REFERENCES

- Castellani, A., and Chalmers, A. J. (1910). *Manual of Tropical Medicine*. Baillière, Tindall and Cox, London.
- Palthe, van W. (1933). *Malayan Med. Journ.*, Vol. VIII, p. 133.

the menstrual cycle for its vitamin-C content. It was observed that the amount of vitamin C excreted varied from day to day, the lowest amount excreted being about the mid-menstrual period. In the graphs given below, the results are plotted and the peaks indicate the days on which the amount of vitamin C excreted is lowest.

According to the teaching of Ogino, the one constant feature in all menstrual cycles is the fact that the menstrual flow starts 14 days after ovulation. The peak in 15 out of the 24 graphs given falls on the day of ovulation, calculated on the teaching of Ogino. Increasing evidence shows, however, that there are anovular menstrual cycles and also multiple ovulations. These facts make the subject complicated.

Though the cases tested by me are too few to admit of generalizations, the graphs suggest that estimation of vitamin C in the urine may form an easy method for deciding the day of ovulation. Other conclusions may possibly also be drawn from them. The graphs depict also anovular menstrual cycles and multiple ovulations. The only convincing way of testing the correctness of the conclusion drawn is by laparotomy, but this could not be done in my series of cases. The subject, therefore, needs further investigation.

I tested the urine of 11 women during 24 menstrual cycles. 15 cycles supported my contention. Out of the 9 atypical cases, 2 appear to be anovulatory cycles and 2 abnormal. One had yet no menstrual flow. No explanation seems possible in 4 cases.

Quantitative test for vitamin-C content of urine

Fresh urine, previously surcharged with vitamin C by administering to the women orally 300 mg. of Redoxon (Roche) 3 to 6 hours before the test, is titrated quickly into 5 c.cm. of a solution containing dichlorophenol-indophenol equivalent to 0.1 mg of 1-ascorbic acid. The quantity of urine required to decolorize, immediately and completely, the dye solution indicates the quantity of vitamin C present in the urine.

Tests done with urine not previously surcharged with vitamin C are worthless for this or any other diagnostic purpose. Freshly voided urine should be used and the test completed in 2 minutes.

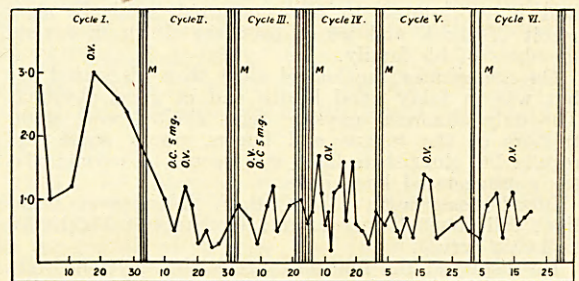
Explanatory notes about graphs

In the graphs, the vertical figures indicate the quantity of urine in cubic centimetres required to decolorize 5 c.cm. of the dye solution and the horizontal figures the days of the menstrual cycle. 'Ovulation' means the date of ovulation as calculated by Ogino's teaching. 'M' means the menstrual flow.

Relevant notes on the cases are given, also available data as regards days of coitus. Follicular hormone (Ovacylin 'Ciba') was administered by injections in 5 cases and these are noted on the graphs. Their effects on the length of the cycle and on the menstrual flow are readily seen from the graphs.

The variations in the vitamin-C content of the urine had no bearing on diet or on health, as the women were having their usual food during the tests and were generally healthy. A graph of the urine of a male is given for purposes of comparison. Cycles in which no urine test was done on the day of ovulation are taken as positive when there was a peak round about the ovulation date. The initial peak in the cycle of each woman indicates only that she was very deficient in vitamin C and the repeated administration of Redoxon for test purposes corrected the deficiency.

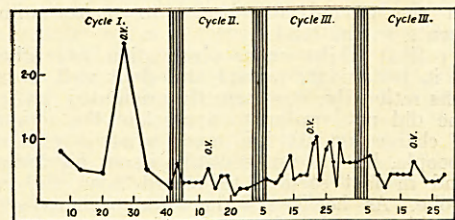
Case 1.



M = Menstruation (vertical lines).
 OC = Ovacylin.
 OV = Ovulation.
 LC = Lutocyclin.
 C = Coitus.

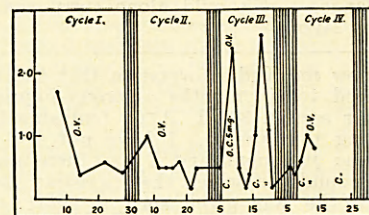
Case I.—Unmarried, age 31. Menses fairly regular but flow unsatisfactory. Six cycles were tested. Note multiple ovulation in the fourth cycle.

Case 2.



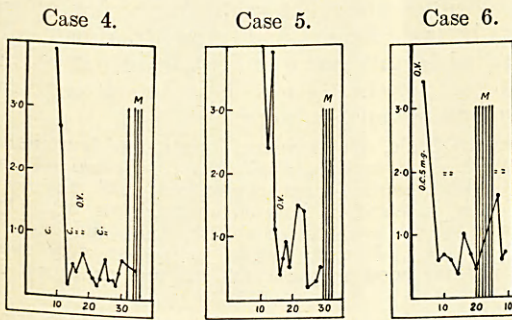
Case II.—Unmarried, age 15. Menses irregular. Note multiple ovulation in the third cycle. Four cycles tested.

Case 3.



Case III.—Married, age 21. One surgical abortion nine months back. The first two cycles appear to be

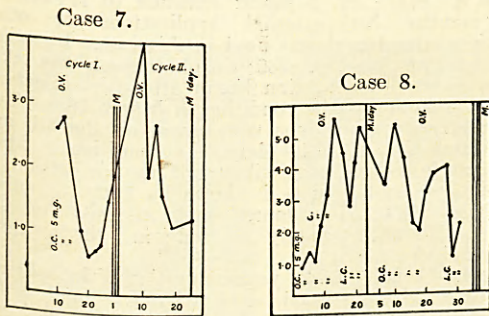
anovulatory, while the third shows multiple ovulation. Four cycles tested.



Case IV.—Married, age 26. One child aged six years. A few hours' flow on the 32nd day, no flow on the 33rd day and three days flow from the 34th day. Multiple ovulation (?)

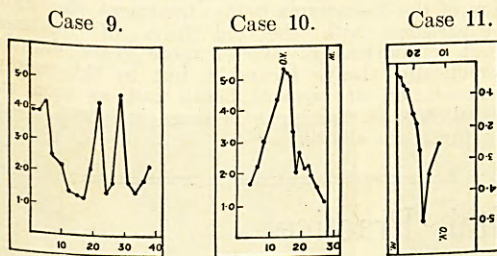
Case V.—Widow, age 36. No pregnancy.

Case VI.—Married, age 28. One pregnancy 12 years back. Very irregular cycle, often extending from six to seven weeks. Course of Ovacyclin injections during the cycle under test.



Case VII.—Married, age 26. Two children aged 12 and 10 years. Remarks same as in last case as regards irregularity and treatment.

Case VIII.—Married, age 35. Very irregular for the last four years, menses every four or five months. Last menses five months back. A course of Ovacyclin and Lutocyclin 'Ciba' during the two cycles under test was given. One day's flow in the first cycle and three days in the second. As date of last menses was not known, an arbitrary date was taken as the beginning of the cycle.



Case IX.—Married, age 25, three children, last being nine months old. No menses after that. A case of diabetes insipidus. Vitamin-C deficiency was very great and the vertical figures are one-tenth of the actual figures.

Case X.—Unmarried, age 29. Tests carried out by Dr. (Mrs.) Socrates Noronha. Vertical figures are one-tenth of actual figures.

Case XI.—Unmarried, age 24. Tests carried out by Dr. Noronha. Vertical figures are one-tenth of actual figures.

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A NEW METHOD OF TREATING LEUCODERMA

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and

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(From the Medical Mycology Inquiry, under the Indian Research Fund Association, School of Tropical Medicine, Calcutta)

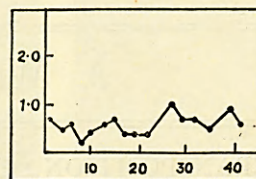
THE successful treatment of leucoderma is, for two reasons at least, an important problem for dermatologists and particularly for those who have to treat dark-skinned races, first because the disfigurement is much more apparent than in those with fair skins, and second because of the widespread but erroneous belief that it is a variety of leprosy and that a victim of the disease accordingly must be shunned by his fellows for fear of infection.

A great deal of work has been done on skin pigmentation, but the full understanding of the complicated chemical changes, which are dependent on endocrine functions, is far from being fully established, so treatment of leucoderma is mainly empirical and is rarely attended by satisfactory results.

Many years of experience of treating hundreds of cases at the Calcutta School of Tropical Medicine has led us to place our faith in external application of the oil extracted from the seeds of *Psoralea corylifolia* and known as *bouchi* oil, together with internal administration of intestinal antiseptics, but although persistence in this form of treatment is occasionally rewarded with success, partial or total failure has much more often been the final result. Recently, we have carried out a number of experimental treatments in which the oil has been injected intradermally instead of being rubbed on the skin, and our results have been so good that this short note is being published to draw the attention of other workers to this method. It is felt, however, that there is still much room for improvement in our technique, and this is only in the nature of a preliminary report.

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Case 12.



Case XII.—Male, age 49.

My thanks are due to Messrs. F. Hoffmann-La Roche & Co., Ltd., and to their scientific representative in India, Dr. K. Schaeffer, for placing samples of Redoxon and dye tablets at my disposal for carrying out these investigations.