

and a fair number of cysts of both *Entamoeba coli* and *Entamoeba histolytica* (of the monkey). The centrifuged deposit was now swallowed by the volunteer.

The volunteer's stools were now examined daily. On the eighth day after the infective feed he had loose stools with some abdominal discomfort. Examination of the stools showed a fairly large number of both motile trophozoite forms and cysts of *Entamoeba histolytica*, with some mucus but no blood or cellular exudate. The diarrhoea persisted for one day, but then cleared up without any treatment. This volunteer has now been under observation daily for two months after the infective feed. No balantidium has ever been seen, but he continues to pass *Entamoeba histolytica*, chiefly in the encysted stage, in varying numbers. The strain of *Entamoeba histolytica* is a small one, with cysts down to 6 to 7 microns in diameter. On one occasion he has also shown cysts of *Entamoeba coli*—apparently also of monkey origin.

Although both experiments failed in their original intention, the transmission of infection with *Entamoeba histolytica* from a macaque to man is of interest as affording further proof that this parasite is identical in both the macaque and man. The second volunteer is still under daily observation, and, if possible, it is intended to keep him off all treatment and study the course of this monkey infection in a human host.

#### Summary

1. The medium advocated by Barret and Yarbrough (1921) proved quite unsuitable in our hands for the cultivation of *Balantidium coli* of macaques.

2. The 'HSre + S' medium devised by Dobell and Laidlaw (1926) for cultivation of the

entozoic amœbæ of macaques and man proved an excellent one in our hands for the cultivation of *Balantidium coli* of macaques, provided that a small quantity of acriflavine was added to keep down the growth of starch-splitting bacteria and blastocystis.

3. Division, encystation, excystation and conjugation of the ciliate were observed at the height of the growth.

4. Two attempts to infect human volunteers with cysts of *Balantidium coli* of *Silenus rhesus*, one made with cysts in culture, and the other with cysts in freshly-passed faeces, both failed.

5. In the second instance, however, the *Silenus rhesus* was also infected with *Entamoeba histolytica*, and this infection was transmitted from the monkey to man and has now persisted in the human volunteer for a period of two months.

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## A Mirror of Hospital Practice

### ATEBRIN IN HEAVY INFECTION WITH *P. FALCIPARUM*

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R., AN ANGLO-INDIAN FEMALE, 59 years old, was admitted into the Carmichael Hospital for Tropical Diseases under the senior author on the 22nd March, 1934, with a temperature of 102°F., and in a low condition. The patient comes from a part of the Central Provinces where a virulent form of malignant tertian malaria prevails. Since her arrival in Calcutta she has suffered from several attacks of fever and has

been treated with injections of quinine and also quinine by mouth. The present attack started three days ago and the fever was continuous. She came into the hospital for treatment.

On admission the patient had a temperature of 102°F. and looked anæmic, weak and debilitated. Physical examination revealed no other abnormality, except that the spleen was just palpable on deep inspiration and that the pulse was of low tension. A blood slide was at once examined for the presence of malarial parasites and a heavy infection with *P. falciparum* was discovered, every field showing approximately fifteen to twenty parasites. The parasites were all ring forms and the developing stages were not met with, even on prolonged examination. A parasite count was made and the patient was put on atebriin—one tablet thrice daily. The blood was examined at frequent intervals when the drug was being administered in order to see the effect on the parasite count and the symptoms. The

results of these observations are given in the following table:—

TABLE

Date	Time of blood examination	Temperature, °F.	Number of parasites per c.mm.	Total amount of atebtrin given
22-3-34	6 p.m.	100	180,000 rings	0
	9 p.m.	98.6	162,000 rings	0.1 gm.
23-3-34	12 noon	100	90,000 rings	0.3 gm.
	2 p.m.	99.4	28,240 rings	0.4 gm.
	4 p.m.	99.2	20,000 rings	0.4 gm.
	6 p.m.	99	13,800 rings (degenerating)	0.5 gm.
24-3-34	3 p.m.	98.4	0	0.7 gm.

For the next three days, i.e., 25th, 26th, and 27th, three tablets of atebtrin were given daily. The peripheral blood remained entirely free from parasites.

Soon after the commencement of treatment the patient started feeling better, the intense headache which was the most troublesome symptom, disappeared on the second day, and the temperature settled finally by the third day of treatment. Although the infection was fairly heavy, atebtrin checked the multiplication of the parasites and controlled the infection. After four tablets the number of parasites came down from 180,000 to 28,240 per c.mm. with signs of degeneration in the plasmodia; after five tablets the number came down to 13,800; and after seven tablets the parasites disappeared altogether from the peripheral circulation.

Summary and discussion

Chopra and Das Gupta (1933) have shown that the destructive action of atebtrin on *Plasmodium knowlesi* is exceptionally powerful. One or two small doses of this drug given intramuscularly or intravenously are sufficient to control a very heavy infection which may amount to a million parasites per cubic millimetre. These workers have further shown (1934) that atebtrin has a much more powerful immediate effect on this plasmodium than quinine. In the case described here the plasmodium infection was not so intense as that encountered in the monkey, but it may be described as fairly heavy for man. Atebtrin here acted at least as promptly as quinine would have done.

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TREATMENT OF SOFT SORE\*

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The treatment of soft sore is notoriously unsatisfactory, and great difficulty is experienced in effecting a cure.

Recently we had a case in which a bubo resulting from infection with Ducrey's bacillus had been incised. After the incision the ulcerated area spread slowly but steadily for ten months, so that the skin of the lower abdomen, thigh and perineum were involved in spite of all methods of treatment.

Finally, Dmelcos vaccine was tried. It was given intravenously and the first injection caused a severe reaction, the temperature reaching 105°F. Three more injections were given at intervals and within ten days the ulcer had healed.

Since then we have used this vaccine on several cases of soft sore with uniformly satisfactory results.

[Note.—Dmelcos is an 'atoxic vaccine' consisting of several strains of Ducrey's bacillus. It is sold in ampoules containing graduated doses for a progressive course of treatment. It is given intravenously.

This is a trade preparation and the name 'Dmelcos' is registered as its trade mark.—Editor, I. M. G.]

A CASE OF PSORIASIS OF ENDOCRINE ORIGIN

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A HINDU FEMALE had suffered from extensive psoriasis for about twenty-five years. Hardly an inch of healthy skin could be seen. The patches were typical in their physical characters, except for their distribution, both extensor and flexor surfaces being involved and also every part of the body except a portion of the face, the scalp, and the soles of the feet. The palms were partially involved. The scales were dry, slightly elevated, and covered with typical silvery scales under which the bleeding hyperæmic papillæ could be seen on removing the scales. There was very little itching. The supratrochlear glands and the glands in the posterior cervical triangle and the inguinal region were not enlarged. Kahn's test was negative.

A full course of neosalvarsan injections was given by another practitioner without effecting any appreciable difference.

Later, she developed multiple rheumatoid arthritis, and became bedridden. I prescribed iodide, salicylate, and sulphate of sodium for some days without any benefit. From the patient's age and the fact that she was approaching her menopause I thought that the case was probably one of endocrine origin, ovarian deficiency being responsible for her psoriasis as well as her arthritis. I gave her ovarian substance, and in about twenty to thirty days' time all the patches of psoriasis completely disappeared and her arthritis was also cured.

It is now about three years and her joint trouble has not recurred, but the psoriasis has reappeared. No local treatment did her any good, although on account of the cost of the ovarian therapy she has been using unguentum acidi salicylici combined with chrysophanic ointment.

\* Réarranged by Editor.