LATENT DYSENTERY, OR DYSENTERY CARRIERS IN SARAWAK, BORNEO.

BY

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EVERYBODY understands by the use of the word "dysentery" that patients have loose stools, with blood and mucus, but my experience in Sarawak is that many people, white or native, may become thin, pale, wasted and weak with what is practically dysentery, without having loose stools or blood or mucus. In such cases I have found abundant amoebae of the *histolytica* type; and when these were cleared out by a few injections of emetine, with saline treatment, the condition of debility, pallor, and wasting disappeared.

The more one searches the more prevalent does one find this condition of amoebiasis. In imported Tamils I have found amoebae in 100 per cent. of the cases. In other batches 80 per cent. were infested with them, and some have developed acute dysentery and died after arrival, thus proving that the amoebae were pathogenic.

Of Javanese in hospital, not admitted for dysentery, I have found 25.4 per cent. with amoebae; and in a new batch of 16, just imported, 56 per cent. had amoebae and 43 per cent. had ankylostomiasis.

Among Malays examined (only three to date) amoebae were found in all, yet they showed no signs of dysentery. It is true that ankylostomiasis was also present. There is a suspicion that Malays who live by the river, and drink its water, into which of course all their sewage runs, are infected with amoebae, ankylostomiasis, and filaria. Research is being made into their condition.

It is very probable, however, that much of the debility, invaliding, anaemia, and "fever" put down to malaria, which is rare here, is due to the septic, irritated condition of the colon in patients infested with amoebae who show no signs of blood or mucus in their stools till they reach an advanced stage of ulceration.

The following statistics from our laboratory may prove this contention:

During nine months since August, 1913, of 554 cases admitted to Sejjak Hospital, 65 were dysentery carriers and 19 others had the usual signs of the disease. Thus there were 12 per cent. of carriers of latent dysentery and 3.4 per cent. of actual cases.

100 Unselected Cases (April and May, 1914) of all kinds.

Amoebae were found in ...	...	...	34 per cent.
Trichomonas in ...	...	...	13 "
Ankylostomiasis in ...	...	...	40 "
Round worm in ...	...	...	24 "
Whip worm in ...	...	...	44 "

Analysis by Nationalities of 100 Consecutive Selected Cases admitted to Sejjak Hospital during May, 1914.

Nationality.	Amoebae Found.	Amoebae not Found.	Total.	Percentage Found.
Javanese ...	16	47	63	25.4
Tamils ...	11	2	13	84.6
Chinese ...	2	12	14	14.0
Dyaks ...	0	2	2	—
Malays ...	3	0	3	100.0
Europeans ...	2	3	5	40.0
Total ...	34	66	100	34.0

In none of these cases was dysentery suspected, nor was blood found. Of the three Malays who complained of pain in the stomach, not only was amoeba found, but trichomonas and ankylostoma as well. In one case *Filaria nocturna* was in the blood at the same time.

Sarawak is nevertheless a healthy country. The reasons are no doubt: (1) The large rainfall (220 in. last year); (2) the cool monsoon breeze; (3) the reduction of malaria by rubber-planting and clearing; (4) the infrequency of cholera, enteric fever, and small-pox; (5) the absence of trypanosomiasis and plague. The temperature also rarely rises above 90° F., and is usually 78° to 80°

in the shade. Although the thermometer may reach over 100° in the sun, heat-stroke is rare. For the equatorial region, therefore, Sarawak may be considered one of the healthiest places, in spite of amoebiasis. Although the death-rate is low, I have found Europeans and natives feeling "rotten," as they call it, or suffering from neurasthenia, who became fit soon after the amoebae were cleared from the colon and the resulting colitis and septic state had been cleared up. It used to be common for patients to attribute everything to a "touch of fever" and to take quinine; but I have found that calomel and saline are much more effective.

The actual death-rate of our hospitals only reached 3 per cent. on all cases, and the three deaths we had out of 33 cases of acute dysentery were due to the fact that the estates were caught by surprise and the cases came in a dying state. After we got emetine and cases in the first stage we had no deaths.

Conclusions.

1. That 30 per cent. or 40 per cent. of the entire population are dysentery carriers.
2. That the examination of them early and treatment with saline clears the colon of amoebae and prevents dysentery.
3. That much invaliding and debility are due to latent dysentery.
4. That the amoeba is of one type and cannot safely be pronounced non-pathogenic at any time.
5. That emetine is most valuable in obstinate latent cases, and is essential in dangerous, acute, amoebic dysenteries, robbing them of their terrors.

THREE CASES OF INFECTIVE ARTHRITIS TREATED BY SPECIFIC METHODS.

BY

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ACUTE arthritis is a common disorder, but it is not always traced to a definite local infection of the joints. Infections of joints due to the *Bacillus tuberculosis* and the gonococcus are of frequent occurrence, and cases of pneumococcal and streptococcal infection are occasionally met with. In many other forms of arthritis infection of some kind is suspected and probable, but it is often difficult to demonstrate conclusively the presence of any organism. In the following cases a bacteriological diagnosis was made with certainty, and beneficial results were obtained in each of them by specific therapy. The term "bacteriological" is here used to include the diagnosis of syphilis.

There are three methods by which a bacteriological diagnosis may be made in any case of infection: the first is the recovery of infective organisms from the lesion; the second is the recovery of such organisms from a site remote from the lesion, but so situated that the connexion between the two sites is clear; and the third is by means of "reactions," by which is meant the demonstration in the patient's blood of bodies which have a recognized bearing on some organism of known infective properties. The cases here reported illustrate each of these methods.

CASE I.—*Staphylococcus*.

Parlourmaid, aged 42. The patient had been long subject to slight rheumatic pains in many joints, especially the right knee, and had had one severe attack of rheumatism in this joint six years before. In January, 1914, while suffering from slight pain in the right knee, she was out of doors in rainy weather; during the following week this joint became very painful and was much swollen, and three weeks later she was admitted to Westminster Hospital.

On admission the joint was very swollen, and so painful and tender that the patient had had no sleep for three nights. The joint was much distended and was held in a semiflexed position; it was punctured and some opalescent fluid was withdrawn, which contained numerous leucocytes and yielded a pure culture of *Staphylococcus aureus*. The joint was aspirated and emptied as far as possible. An autogenous vaccine was prepared; the patient was inoculated, and in due course extension, massage and passive movements were employed. The result was very satisfactory and ended in complete recovery.

There were some points of interest in connexion with this case. There was no history of trauma nor any