On January 22nd the pulse was 84. He had had a bad night, sleep disturbed by hiccough, and great weakness present. The lips and tongue were brown and thirst insatiable; the heart sounds were extremely feeble. Intense prostration, restlessness, and insomnia were present, and feelings of constriction around the chest were complained of, which friction with brandy dissipated. In the evening the pulse was 84. Next morning the pulse was 92. He had had no sleep during the night, hiccough being continuous and weakness appalling; hæmatemesis also occurred. The colour of the skin seemed to become a lighter yellow, and to fade slightly from the conjunctivæ. The pulse in the evening was 96. Sulphonal as well as bromides were given without result.

On January 24th the pulse was 108. The body was very cold and difficult to warm. Hiccough was extremely troublesome and tongue and lips were black. A hæmorrhage burst from the mouth, and about 4 drachms of acid albuminous urine were passed voluntarily. Stimulants were taken every quarter of an hour, and consciousness remained up to five minutes before death, which occurred at 5 P.M. At 4 P.M. the temperature was 98.5°, pulse 104, and respirations 48.

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REMARKS ON YELLOW FEVER IN JAMAICA.

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RECENT HISTORY OF YELLOW FEVER IN JAMAICA.

FOR some time past yellow fever has been rare and almost unknown in Jamaica. I have often been asked by recent arrivals how it was that no one heard anything about a disease that used to be so common and fatal in Jamaica. I have never been able to give a satisfactory answer to the question. Even sporadic cases appeared to be things of the past, and there was a growing confidence that the dread disease had died out. Unfortunately the late outbreak indicates that, whatever may have been the cause of the happy lull, yellow fever is still a Jamaican disease, and only wants something to start it, and pabulum to keep it going. It may be that the recent outbreak was determined by the periodicity which is supposed by some to regulate epidemics, acting at a time when sanitary matters were not as they should have been. As soon as the disease showed itself in Kingston there were many and various speculations as to the cause. Dr. Anderson, late of Jamaica, in his useful little book just published, has truly said:

It may occur in the most healthy country localities with perfect sanitary surroundings and be absent in city slums where from filth, overcrowding, and malaria it might be expected to exist. I do not believe that the very worst conditions of sanitary neglect will ever by themselves alone generate a case of yellow fever; something else must be added thereto.

In the recent outbreak in Jamaica the spread of the disease could not be accounted for, nor could the cases be linked on to one another. There was apparently some general atmospheric condition which affected more or less the whole island nearly at the same time. There were a few individual instances of the disease being carried from place to place, but most of the cases could not be traced in this way. It was a significant fact that while yellow fever attacked certain persons, there was at the same time a general occurrence of malarial fever, especially amongst the natives. To each case of yellow fever in my practice I had at least 30 cases of malarial fever, some of them of a pernicious type. There were some unacclimatised Europeans who did not contract yellow fever, but suffered from malarial fever. During the outbreak an officer living within two miles of Up Park Camp brought his wife and nine children out from England. In a short time I had them all under my care, not with yellow fever, as was expected, but with well-marked malarial fever;

some of them were very ill. Amongst the black and coloured people I had a few cases of pernicious fever, some with jaundice and a few with albuminuria, the temperature going as high as 106° F. The mortality was not high, the disease yielding to quinine. All my cases of yellow fever were Europeans, and with one occasion severe hæmorrhagic cases. The mortality in my practice, not counting the cases I saw in consultation, was 37.5. The treatment I adopted was that known as Sternberg's. I had one well-marked case of hæmoglobinuric fever, the so-called blackwater fever of Africa, not a common disease in Jamaica. Of my yellow fever cases only one died from suppression of urine. This was a bad case from the start; the patient died on the fourth day, and had only secreted 6 ounces of urine during her illness. The "walking cases" are not often met with in Jamaica. Dr. Anderson in his large and long experience never saw a case. I had one some years ago. The disease was then epidemic in Port Royal, and very fatal amongst the sailors and white artillerymen.

Case of Ambulant Yellow Fever.—The commodore and family had a hill residence in St. Andrew, about twelve miles from my house in the Liguanea plains. One night the commodore sent for me to see his secretary, who had the morning before left Port Royal, and had ridden up the hill apparently well. I arrived at midnight, and found my patient lying dead fully dressed. His half-smoked pipe lay on a chair near the bed. The story told me was this. He had felt feverish soon after arriving from Port Royal, but had gone about the garden. An army surgeon who had passed by had seen him, and prescribed quinine. Towards evening, not being able to pass water, he complained to the commodore, who, imagining that it was a case of retention of urine, sent for me, requesting me to bring my catheters. At 10 P.M. he lay down without undressing, and after I had been sent for was found dead. I was able, by slightly inverting the body, to get black vomit to ooze from the mouth, and in drawing off with the catheter about one ounce of urine, all there was in the bladder. I found it one mass of albumen. The skin was slightly yellow, and one nostril blocked with a blood clot. I was informed that he was walking about the grounds a couple of hours before lying down.

A year or two before this I had a case which I think worthy of notice as indicating (1) rapid incubation, (2) decided infection, and (3) much muscular power during the first few hours of a quickly fatal case. In Quain's *Dictionary of Medicine* this case is alluded to in the article on "Incubation of Yellow Fever."

Case of Infection: Sudden Death after Exertion.—Yellow fever was not epidemic at the time, but a fatal sporadic case had occurred in Spanish town in a European inspector of police in a lodging house. After his death the bed had been sunned, but no disinfection of the room had been resorted to. About three days after a young Russian lady, who had been in Jamaica some months as governess in a country family, passed through Spanish town on her way to St. Ann's. She was quite well when she arrived at the lodging house in which the inspector of police had died, and she was put to sleep in the same bed which had only been sunned. The next morning very early she rode on horseback thirteen miles to Linstead, where I was then practising. When she arrived at the house of the rector of the parish, she felt faint on getting off her horse, and on being placed on the sofa vomited. I was sent for and was able to diagnose yellow fever at once. By evening black vomit and retention of urine were present; hæmorrhages soon followed, and she died early next day suddenly from heart failure, falling back on the bed while combing her hair. She had got out of bed, and had taken a looking glass in order to put her hair to rights.

The infection in this case was as rapid as typhus. There can be no doubt that during the stage of calm many deaths occur from injudicious muscular exertion. A patient of mine on the tenth day, while progressing favourably, got up against orders, and walked to the closet in the next room. Hæmatemesis and prolonged convalescence were the consequences. An army surgeon, some years ago, at Up Park Camp, while convalescing, walked to a friend's room near by, and sat up for some time. He became faint, and died the next day from heart failure.

Errors in Diet.—As Dr. Anderson points out errors in diet may have a fatal result. A Royal Engineer officer had apparently weathered the storm, so much so that the mail conveyed to his wife in England comforting accounts of his recovery. His nurse (one of the "Grannies") permitted him to share her breakfast, consisting of salt fish, yam, and roasted green plantains. Soon after he complained of acute pain in the stomach. This was followed by vomiting of blood and speedy collapse.

Although suppression of urine generally brings the case to a rapid end, cases now and then occur in which the patient lasts out three or four days without secreting one drop of urine.

Prolonged Anæmia.—An officer at Up Park Camp, whom I saw frequently in consultation some years ago, lived over 162 hours in this condition with a clear mind until he died in uræmic convulsions. He sat up and was writing a letter when seized with convulsions.

DIAGNOSIS.

Dr. Anderson's remarks on mixed cases are well put an

worthy of consideration. I am quite sure that errors in diagnosis are often made by a too strict adherence to microscopic "rule of thumb" observation. The indications of malaria as revealed by the microscope may be mixed up with yellow fever, and an absence of these indications may also lead to wrong conclusions. When the two fevers are prevalent at the same time, as recently in Jamaica, such mistakes, especially with acclimatised natives, are very apt to occur.

INFECTION.

I have no doubt, from actual observation, that infection through fomites is sure and powerful, but whether the diseases is spread from person to person, as small-pox, measles, and scarlet fever are, I very much doubt. When I was a student in the Public Hospital, Kingston, Jamaica, many years ago, the cases of yellow fever—very numerous there—were treated in the same wards with other diseases. One morning thirteen sailors were admitted. They nearly all died. I opened and examined five bodies, and took no extra precautions after leaving the deadhouse. The late Dr. Andrew Dunn, of Kingston, did not believe in infection. I was attending a case of yellow fever some miles away, and during the night my shirt was saturated with black vomit. I was not able to change until the next day. I never could trace infection from these and similar occurrences.

TREATMENT.

Dr. Dunn had a large experience in yellow fever, and was most successful in treating his cases. I had the advantage of seeing many of his patients with him. He was essentially a "calomel doctor," and prescribed calomel with a liberal hand from beginning to end. The first case I saw with him was an English official who had just lost his wife from yellow fever. He was in the stage of calm and profusely salivated. This gentleman recovered, but lost all his teeth. Dr. Dunn used to say that nothing pleased him better than to see his yellow fever patients salivated. I had under my care some years ago a clergyman and his wife, and a colonel of the Royal Engineers, his wife and daughter, all with yellow fever at the same time. I treated them with calomel, but without salivating them. They all recovered. Dr. Sternberg gives the perchloride of mercury throughout the whole attack in yellow fever.

As far as our present knowledge extends, there is no drug which has any specific influence over yellow fever. The time-honoured calomel purge to start with seems not only to be the custom amongst the physicians of the old school, but also of the young school. The experienced man must be ready to meet emergencies as they arise. The late Dr. W. B. Keech, one of the medical officers of the Public Hospital, Kingston, when I was a student there, had charge of most of the cases of yellow fever. He had been some time in Cuba, and after the usual calomel purge, would give equal parts of castor oil and olive oil, and, above all things, would starve his patients for two or three days, giving them as much water as they wanted. He would let them have orange-leaf tea, and, if they liked it, small drinks of black coffee. He considered blisters contraindicated as liable to set the kidneys wrong. For suppression of urine he would apply over the loins large and oft-repeated hot linseed meal poultices, and give largely diluted doses of gin and nitre. He was considered very successful in the treatment of yellow fever. He seemed to be a disciple of Dr. James Lind, whose essay on *Diseases Incidental to Europeans in Hot Climates, etc.*, written in 1792, is worth careful reading. A case occurred within my recollection illustrating the benefit of starvation during the early stage of yellow fever. A sailor in order to avoid being sent to the hospital, hid himself under a wharf, taking his blanket and a pan of water with him. At the end of four days he crawled out, his beard and shirt being stained with black vomit. He recovered, having "cheated the doctor," as he expressed it. One of my patients during the late outbreak lived for over three days on wine-glassful doses of warm barley-water taken occasionally. His nurse forced him to take milk and soda once, but this he immediately vomited, and refused to repeat the experiment. Of course, he drank water. A young English lady told me after she had recovered from an attack of yellow fever that she used to throw more than half her nourishment into the utensil, watching her opportunity when the nurse was not looking.

My own opinion, based on experience, is that during the first stage of yellow fever patients should be very sparingly fed. It is better to starve than to over feed them.

CHRONIC DYSENTERY.¹

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DEFINITION.

ALTHOUGH the chronic form of dysentery is that to which I propose specially to direct attention, it will be necessary to begin by briefly considering the nature of dysentery generally, and the first step to a clear comprehension of our subject will be a definition of the term.

Under the term "dysentery" is embraced a group of diseases affecting chiefly the large intestine. These diseases are mostly similar in their symptoms, but they differ in their etiology and in their pathological results.

GEOGRAPHICAL DISTRIBUTION.

Dysentery occurs both sporadically and in epidemics. In temperate and cold regions it is comparatively infrequent and mild in its occurrence, while in the tropics and subtropical countries Hamilton West, an American writer, ranks it "in malignancy and mortality with yellow fever, small-pox, and cholera as one of the four great epidemic diseases in the world." That this disease, as well as all forms of gastric and enteric catarrh, increase, generally speaking, in frequency and severity as the tropics are approached and the temperature rises, there is no question.

Thus the dysenteric death-rate in the French army for 1872-1880 was 0.22 per 1,000, that of the English army in Egypt for 1884-1888 was 2.24 per 1,000, while in Senegal about 13° N. the deaths from dysentery, according to Doutroulau, form more than one-third of the total mortality. Although these figures doubtless represent approximately the relative frequency of the occurrence of the disease in different latitudes under normal conditions of life, great havoc has been wrought by it at different times under exceptional conditions of living even in the temperate latitudes of Europe. Thus it has often proved the scourge of armies, notably among our troops both in the Peninsula and Crimea. It is the disease of famished garrisons and ill-fed prisoners. And while in the tropics and subtropics dysentery becomes one of the most familiar diseases with which the physician is called upon to deal, yet even in these latitudes it is especially the attendant upon the traveller, the explorer, the hunter, the missionary, the gold prospector—all, in fact, who live a wandering open-air life, sleeping in tents or in the open, exposed to wet and cold or extreme heat, drinking frequently of impure water, and eating at irregular hours and of uncertain rations. I have during my sixteen years' sojourn in different parts of South Africa only once suffered from an attack of dysentery myself, and that was after a forced march during a campaign, when I went for nearly twenty-four hours without food, and then ravenously fed upon some very imperfectly cooked meat.

Dysentery appears to be occasionally, though not usually, contagious; and Sir Joseph Fayrer believes that it is sometimes transmitted by the effluvia of the discharges from a dysenteric patient to other patients in the same ward. I confess that I have not personally observed such a case, although I have frequently treated dysenteric patients in the general hospital ward, but mere negative evidence of course proves nothing.

ETIOLOGY.

Dysentery is such a ubiquitous disease, and certain well-known predisposing causes are so frequently followed by it, that one is compelled to believe that if a micro-organism be indeed the cause, any condition setting up intestinal catarrh will provide a suitable soil for the growth and development of such micro-organism, and that from the readiness of the onset of dysentery in a subject under the influence of these predisposing causes, the micro-organism itself is even more omnipresent than that of tuberculosis. In addition to exposure to wet and cold, extreme heat, impure water or food,

¹ Presented to the Section of Medicine at the Annual Meeting of the British Medical Association, Edinburgh, 1898.