Reading for Pleasure

Something new (and nasty) out of Africa

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I must confess that when I first saw the lurid flaming cover of the paperback on a Heathrow Airport bookstall I was repelled rather than attracted. My negative chemotaxis was potentiated by an obtrusive exclamation-mark gratuitously placed after the single word of the title. *Fever !*[1]—just that. Overcoming my standoffish purism, I removed the book from the stand, hoping that the coy glances of fellow browsers did not indicate that they were mistaking my strictly scientific curiosity for prurient dilettantism amid the voluptuous covers of adjacent books.

Another frothy bit of journalism, I thought, as I read the words "Lassa fever." Another cheapjack author, wringing the last tear-stained drop of emotion from a succession of human tragedies in West Africa, and rushing into print with a distorted and inaccurate popular account of a complicated scientific problem. Fortunately, I had second thoughts, and I am glad that I did not dismiss out of hand the book and the author. *Fever !* is a thriller, a whodunit, with a difference. It is a fascinating factual account of the search for the cause of the death of a couple of missionaries in West Africa, an account that holds the attention to the end, despite the fact that we already know the criminal and his hiding place. And it is well written, too, by someone who can write.

I must declare my interest. I have been concerned for some years now with the problems of transmissible diseases in Africa and the tropics generally, including the management of patients who on their return to Britain from a sojourn overseas suffer from fever. The Hospital for Tropical Diseases, London, and Coppett's Wood Isolation Hospital form part of my mental background. Another interest: delving into memory's depths, I unearthed more than one half-forgotten episode from the days when I was a missionary doctor in the former Belgian Congo. Once I was called to see a severely ill European patient in the Stanleyville Hospital. Had he not been protected by specific inoculation, I might have called his trouble yellow fever; or it might have been scrub typhus (but the Weil-Felix reactions were negative); and he had been taking his antimalarials regularly. What was the infection that was to cause his death within a few hours ? From time to time, I heard frightening stories from the equatorial rain forest of fatal haemorrhagic febrile illnesses that struck suddenly and disappeared just as suddenly. Then, on a visit to Johannesburg in 1975, I found the pathologists talking about the death in a local hospital of an Australian hitch-hiker from Rhodesia—and the cause of death was Marburg virus, green monkey virus. All this adds up to a mounting interest in viral diseases in Africa and elsewhere, an interest intensified by visits to Thailand and South America and accounts of fatal haemorrhagic fevers caused by recently identified viruses.

So the stage was set, or, to use a more appropriate term, the monolayer of susceptible cells was prepared: a non-virologist has been "infected," heavily infected, and the replicating minuscule viron is still multiplying happily in cells of my cerebral cortex and wherever else thought forms and picture images are created and registered and stored. *Fever !* has done its deadly work. I am fatally infected, hopelessly hooked.

It says much for the sheer interest of the unfolding story told in *Fever !* that I should fall victim to this irresistibly attractive saga of courage and tragedy. The bare facts do more than speak for themselves—they show outstanding qualities of devotion to duty: the mission doctors and nurses, the national medical auxiliaries, all display a remarkable self-abnegation and dedication. So do the research workers in Yale and Atlanta. So do the backroom boys (and girls) who handled and processed the unknown deadly stuff flown in from West Africa.

The resources of modern technology were allied to a determination to get to the bottom of the mystery of the fever that struck, the fever that killed. It was dangerous work, dangerous for those in the front line devoting themselves to the care of the sick in West Africa—tired as they were from battling with an outbreak of yellow fever. And now *this*. It was dangerous, too, for anyone within coughing distance of someone struck down by the disease, or at risk of a needle prick, with contaminated material. Yet they never flinched, although they must often have been scared. And they persevered until the mystery was solved; the virus isolated and identified and classified with the arenaviruses; the specific antibodies tracked down in convalescent serum and in sera obtained from many countries in West and Central Africa.

Detective work

The detective work, as recounted step by step in the pages of *Fever !*, shows a doggedness, a painstaking perseverance, quite beyond praise. There is the tracing of the index case of the hospital outbreak, the careful documentation of the probably nosocomial transmission, and then the hunt for the rodent reservoir of the virus—eventually identified as the multimammate mouse, *Mastomys natalensis*. Thrilling stuff, this—almost justifying the lurid cover and the exclamation mark.

Then the investigation widened, and clinical, serological, and epidemiological data were painstakingly collated and analysed. Yes, Lassa fever has occurred, and is occurring now over a wide area of west and central Africa, from Sierra Leone to Zaire. It must be included in the differential diagnosis of any febrile illness unresponsive to antibiotics and antimalarials, and whose symptoms may vary from the extremely severe and rapidly fatal to the transient and non-pathognomonic.

Something else shines through, and it shines all the more brightly because it is incidental and unobtrusive. It is the simple faith of many of the protagonists, the principal actors in this high drama. None of the aggressive piety or mock heroics of the meretricious and tub-thumping evangelist, but sheer human goodness based on a real faith in God. Some folk might dub it naivety, or mindless fatalism tinged with Christian phraseology, but that doesn't quite fit the picture painted in the

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book with such fidelity to the facts. The author couldn't help himself in the face of what he was seeing and recording. *Fever !* does not set out to be an apologia for medical missions or for the Christian faith (the author doubtless would not wish to be seen as an advocate), but none the less, it is.

Lassa fever story

By a curious coincidence, after lecturing in Marseilles at the Military College of Tropical Medicine in January this year, I was given a copy of a book entitled *La Fièvre de Lassa*,[2] which is an edited version of an outstanding doctoral thesis by Samuel Saltzmann presented before the medical faculty of the University of Strasbourg. Here is another book that I have read with real pleasure (and profit). A serious work of some 329 pages, it supplements with many references and extensive quotations the story told in graphic and continuous form in *Fever !*

Dr Saltzmann's personal concern with the Lassa fever story began with his secondment, as a French national service doctor, to the Sudan Interior Mission Hospital at Bembereke, in the Republic of Benin. He was fascinated by the clinical and pathological aspects of the disease that was becoming an obsessive nightmare for many—doctors and nurses working in mission hospitals and civil public health administrators, as well as home mission boards and medical officers in London and New York. Here, then—for those who follow French—is an excellent scientific record, full of details of laboratory investigations and virological research, and supplemented by accounts of more recent outbreaks of the disease in West Africa.

Deep waters and outlandish places

To complete the trilogy, I was sent a copy of the proceedings of the international colloquium on *Ebola Virus Haemorrhagic Fever*[3] and other haemorrhagic fevers, which was held in Antwerp in December 1977. Arriving on my desk at about the same time as Dr Saltzmann's book, this volume (competently edited by Dr S R Pattyn, who makes important contributions to the colloquium) cried out to be read and pondered. In Zaire and in the Southern Sudan, outbreaks of this serious viral disease required the teamwork of investigators of international repute. The electron microscope showed that the causative virus was morphologically identical to Marburg virus, but fluorescent antigen and antibody techniques showed that it was immunologically distinct. The whole subject is becoming confusingly complex. I am left floundering in deep waters and unfamiliar currents.

Perusal of this volume enhances my respect for colleagues who go to the outlandish places where the action is—and where the danger is—and, with the essential co-operation of their co-workers in the laboratory, help to unmask the mysteries of infection and resistance, of definitive animal host and transmission, of care of the victims and protection of the exposed population.

My thanks to all—the dramatis personae and the authors and editor—who have afforded me much pleasure . . . and profit.

[1] Fuller, John G, *Fever !*, London, Panther Books, 1977.
[2] Saltzmann, Samuel, *La Fièvre de Lassa*. Haute-Savoie, France, Editions des Groupes Missionnaires, 1978.
[3] *Ebola Virus Haemorrhagic Fever*, ed S R Pattyn. Elsevier, 1978.

STRANGE ENCOUNTERS

Budget for merit

When, after 15 years as a consultant in the NHS and 10 years in a clinical chair, I got my C award, the news was made known to me by the chairman of the board in a formal letter which read, "It seems that you have been given a lowest grade distinction award. As this was not on our recommendation I have queried the notice with the Ministry and am told that it is correct and that you are to be informed accordingly. I find this most extraordinary." It turned out that the board had been notified of the award seven months earlier. I found this extraordinary, and even more extraordinary that there had been no reflection of the award in my pay packet.

A few days later, perhaps because of my mercenary inquiries, I received a letter from the chairman of the governors of the medical school (the chairman of the hospital's board, in another of his hats). It gave me the information that, as a concession to the school and in no sense as a precedent, the hospital would pay to the school the amount of my award, which would thus be at the school's disposal as part of its general income. Inquiry confirmed that the money was not to be paid to me.

Eventually, a ruling was given by the Ministry, and emphatically endorsed by the vice-chancellor of the university, that the award was to be regarded as personal income of the consultant. The chairman of the school soon chased the news of this ruling with a memorandum to tell me that the budget of my department would be reduced annually, with immediate effect, by the amount of the award. When that, too, proved to be unallowable, the board of the hospital cancelled my honorary contract and stopped payment of the award on the grounds that I had thus ceased to be a consultant.

The annulment of the contract was held by the university to be a breach of the agreement by which the hospital board undertook to give an honorary consultant contract to all clinical professors and readers appointed by the university to the staff of the medical school. The hospital board restored the honorary contract and undertook to pay the award, and asked the university to move me to a chair tenable in some other school—any other school so long as it was not associated with them. The university refused. I received the award, my department's budget remained as inadequate as previously but was not docked of any sum, and nothing more was said. Later, it even proved possible to obtain payment of the arrears that the hospital had withheld, but that took a year or two.

Someone had to be first. Looking back, I can see its funny side, although the comedy is that of caricature. It was not funny at the time. It is not funny to be described by the chairman of a body of which one is a member as childish, mercenary, lacking vocation for one's profession, and motivated by self-interest. And not even the medical members (none of them clinicians) found any cause to contradict him. It was a long time ago.

What pill?

A house surgeon, while taking the history of a young woman admitted with acute appendicitis, asked if she was on the pill. She replied that she was. After the operation she went into coma. It was thought that she might have had a cerebral arterial thrombosis, as a complication of the general anaesthesia and predisposed to by the contraceptive pill. In fact, the coma proved to be diabetic. The pills that the patient had been taking were chlorpropamide.

The physician who supervised the restabilisation of the diabetic state remarked to the patient that it had been rather unintelligent of her not to tell the house surgeon that she had diabetes. She allowed her quick Irish temper a little rein, and replied that it was rather unintelligent of the house surgeon not to have asked her what pill she was taking. The houseman grumbled that the most basic lack of intelligence had been that displayed by the family doctor in not mentioning that the patient was diabetic when he sent her for admission with appendicitis.

The surgeon who had taken out the patient's gangrenous appendix, bored by the chain of recrimination, was looking through the patient's notes. He silenced everybody by reading aloud from the family doctor's letter, which began, "This patient is a well-stabilised diabetic. She takes chlorpropamide tablets, 200 mg daily, and this keeps her well controlled. She seems now to have acute appendicitis. This started. . . ."

Afterwards, the physician said to the surgeon, "It wasn't very intelligent of you to operate without reading the doctor's letter, was it ?" The surgeon agreed.—WILL MACREDIE.