DISCUSSION

Professor Maegraith: In the last number of the *Practitioner* I said that when somebody goes away they should take with them good advice; they should be properly vaccinated and protected as far as possible by anti-malarial drugs if necessary, and they should take the minimum amount of drugs. I think that sums up the situation. The question of *Plasmodium malariae* infection is interesting, because it is difficult to understand why there should be a long period in which none of these infections appears. We have noted that in various parts of the world there are strain differences in the parasites, the length of time between relapses varying very much according to the strain. *P. vivax* malaria in Burma regularly relapsed at about six to eight weeks and we got quite used to picking this up; in fact, we could more or less guess where the men had been because in some of the Indian strains the period was three months or more. We have never really solved the problem of *P. malariae* malaria and there have been instances in which the first relapse occurred as long as 20 years after infection, but I think it's possible that a few of these may still appear. For some reason it is more difficult for the casual potential patient to be infected with *P. malariae* than with *P. vivax* or *P. falciparum*, and relatively few of these people who have been exposed to *P. malariae* have ever shown up with it. This seems to be true also in the endemic areas because *P. malariae* malaria has a very clear age distribution. In West Africa for instance, it is seen in children up to the age of about 14 and then for no reason at all it disappears. It is quite unusual to see any adult visitor infected with this particular species of malaria parasite. I think possibly some of these may appear, one or two of them might come up as a result of transfusion; the classic case of western United States was the transmission of *P. malariae* 30 years after the patient left Italy, and in the whole of that period there was no demonstrable clinical picture, perhaps because the parasite had produced enough immunity to suppress itself every time it came up. This of course is what happens with the hepatic form of *P. vivax* malaria.

The other question I have concerns cysticercosis. Cyst formation depends on swallowing the eggs of *Taenia solium*, and the number of cysts produced will depend on the number of eggs which have developed into cysts; if there was only one worm and only a given number of eggs were swallowed, new cyst formation should not be expected. What may happen is a local change in circulation or something of that sort causing symptoms from a cyst which has up until then remained quiet. There is, in Edinburgh, a gentleman with a hole in his head, which was made in 1907, he still has fits, and he was one of the cases which led originally to the discovery that cerebral cysticercosis existed.

Dr Petty (*South Wales*): If taking a chest radiograph and blood film from immigrants becomes compulsory, should intractable diseases such as sickle-cell anaemia, now becoming endemic, be excluded from this country?

Professor Maegraith: I do not think that ordinary examination of blood would normally reveal the sickling trait. Most of the people we see with

sickling are trait carriers and there are relatively few people with sickle-cell anaemia who come to us; they are mostly children and they are fairly easily diagnosed because they are already anaemic and usually come under observation fairly fast. The possibility of spread of sickle-cell trait in this country depends on the way in which these people intermarry. The picture is one of straightforward Mendelian distribution and the presence of the genetic factors does not matter very much to the population as a whole, though it matters very much to the individual concerned. We have found in our own clinics that many Africans do not like having their blood examined for sickle cells, or even for glucose-6-phosphate dehydrogenase deficiency, because they feel that there might be some pressure against their marrying a partner who also had the sickling trait, they would rather not know about the genetic possibilities, whereas I think they should. The routine examinations would not exclude anything much more than tuberculosis and blood diseases such as trypanosomiasis, filariasis and malaria.

Dr Coulter (*Glamorgan*): My question concerns record linkage, which has not yet been fully developed. I would like to ask whether the panel has any suggestions to make about getting evidence of the state of immunization of individual patients.

Dr Watson: I understand that there is no factual information about the total immunization of any community in this country, and we are trying to establish this for our own practice; we are hoping to complete during this year a record for everybody in the practice giving information about immunizations not only against the ordinary childhood diseases but against typhoid and cholera. I think this is something which more than one practice ought to study, certainly something which an urban practice in an area as exposed as Cardiff and South Wales is to imported disease, ought to have a look at.

Chairman: Whatever the system is and whatever computers do to make the records generally available at short notice, it relies basically on the information recorded.

Dr Thomas (*Glamorgan*): To ensure that the general practitioner does not miss exotic disease in its early stage could we not persuade a drug company to produce a poster for display in our surgeries, saying something to the effect of, "Have you been abroad? If so, do not hesitate to tell your doctor, before he whisks you out of his consulting room".

Professor Maegraith: A pharmaceutical company did produce a pamphlet for me, which was sent to 15,000 doctors and contained a map showing the distribution of major diseases which might cause trouble either to the individual or to the community. When I originally raised this subject some years ago in *The Lancet* I suggested that wall maps should be available for every medical practitioner, and I think also that a modified one might be available for the patients' waiting rooms, because it might make them realize that their recent travels were important and should be mentioned to the doctor.

Chairman: Have you an example of what you want to display in a doctor's surgery Dr Watson?

Dr Watson: My guess is that we shall go away from this symposium on imported disease and miss some perfectly ordinary illness that we ought to have diagnosed, because we are concentrating on imported disease. If either you or your patients stop to think about it you will not miss it. The problem is, how to know you are dealing with imported disease before you make a diagnosis. You must be alert for any strange feature in something that seems initially perfectly ordinary. For a short spell, a poster on this in the summer holidays or at a time when people are coming home would help a great deal.

Could we cope with everyone who came home on an aeroplane if they had to bring their yellow card to their doctor, I wonder?

Chairman: It is never good to introduce dull routines if you can help it because it makes people less careful about their work and they tend to do it quickly and rather badly.

Dr Colville: What minimum of drugs would you give to those going abroad?

Professor Maegraith: I think you first have to determine how they are going to travel. The chances of getting seasick these days are fairly remote, but quite a lot of people get air-sickness, many before they even get in to the plane, so I think you have to know enough about drugs which can relieve air-sickness and prescribe them if necessary. You should not prescribe any more than is necessary for a particular journey. My experience is that almost everywhere I go, even now, I get some sort of gastro-intestinal disturbance, and you ought to prepare them for that. The question whether you should give one of these insoluble sulphonamides as a possible suppressive must be left to the individual doctor, although I would not give them to a layman. One of the things that very often happens in air travel is acute intestinal discomfort due to the pressurising of the aircraft; the usual methods of relief of gastric distension are sufficient. I would prescribe something containing codeine phosphate which would not only help the intestinal discomfort, but would certainly relieve the pain often associated with diarrhoea. Some people don't get diarrhoea but they get constipation, relieved by a simple compound like Senokot. On the whole I believe in giving as few drugs as possible. The best thing to give patients is advice, tell them not to eat salads in India, to peel their fruit and not to go into dirty restaurants. One good solid meal in a dirty restaurant could give you typhoid whether you had TABT or not. The other thing which is very important is to know what vaccinations and what suppressive drugs are necessary for the particular area to which the person is going.

Chairman: Dr Watson, do you have any instructions to give your patients?

Dr Watson: I think there is another aspect. I do not know whether you have patients who insist on travelling through several different time zones, but I think that the thing my patients appreciate most is some short-acting, precisely-timed sleeping capsule which allows them to sleep from one particular time zone to the next and then wake up fresh. For the permanent emigrant to the tropics, I would pass on a bit of advice

that my father put into a book which was published by the School of Tropical Medicine and Hygiene, The Ross Institute of London; "remember the person who has the greatest chance of murdering you without a trial is your own cook, so pay him better to keep you alive than to kill you". Your servants abroad are the ones who give you your diseases.

Professor Maegraith: The one person that we ought to remember is the university student. The young like travel and they travel in big groups. I have found that hardly any of them have been given reasonable advice about ordinary hygiene or what they need in the way of protection; the only vaccination information they receive comes from travel agencies not from their doctors. We ought to appreciate that this sort of advice is necessary. I have just discharged a patient who is a student in a northern university and who decided it would be a good thing to go to the tropics through the Sudan, Egypt and parts of East Africa and live like the natives do. He picked up eight infections including schistosomiasis, none of which he need have had if he had used his commonsense or if the doctor had inoculated him.

Dr Scott (*Stonehaven, Scotland*): In East Scotland there has been an increase in brucellosis and I wonder whether this is general in Great Britain at the present time; does this come within your knowledge Dr Roden?

Dr Roden: It is not easy to put a figure to human brucellosis although information through laboratories gives a fairly reliable indication of the extent of the disease. This is very much, as so many epidemiological problems are, a localized problem. I often think that a study of national statistics, unless broken down into epidemiologically significant groups means that you are just looking at something which you are not interpreting. There may have been a local increase in this area but this would not necessarily be part of a national increase because brucellosis is essentially a problem of individual herds. It is undoubtedly an important disease and one which the Ministry of Agriculture, Fisheries and Food are now interested in eradicating entirely from Britain. The short answer is that statistics for human brucellosis in Britain are not available and even if they were they would not be much use in looking at a problem of this kind, because what matters is brucellosis in cattle and not in man.

Dr Watson: I know some veterinary colleagues who would be delighted if the Ministry of Health would introduce even voluntary notification of undulant fever. We cannot possibly know how much there is and whether it is increasing or not if it is not notifiable for research and control purposes, we ought to have more information and I would like every medical officer of health to make it locally notifiable, and tell the Ministry what is happening. We have made two or three attempts to get a scheme going through the College; it may still be that we will make undulant fever voluntarily notifiable in the form of outbreak notification through the College.

Chairman: For every laboratory which recorded a positive test for brucellosis whether agglutination or brucellin test or what have you,

or very occasionally a positive culture, would it be practicable to report the finding to the medical officer of health?

Dr Wilson: It will be so if it reports to the Public Health Laboratory Services; more and more are doing it, so automatically it goes into the weekly summary, but I do not think this is quite enough.

Professor Maegraith: This is one of the reasons why this important problem of imported disease has been missed; many of these diseases are not notifiable, and nobody has the foggiest idea what the score really is. Malaria is notifiable but I doubt very much if people often notify it.

Chairman: The general practitioner is dealing with a whole host of things all day long, unless he lives in the North East of Scotland or in parts of Lancashire where brucellosis is not uncommon, he may only see one case in a lifetime whereas the laboratories see many cases. It should be much easier for them to keep on the alert.

Dr Skone (*Bristol*): The fundamental problem with brucellosis in the past has been the lack of a really accurate diagnostic seriological test, but the work of Dr Kerr in Northern Ireland has improved matters considerably. At the moment medical officers of health initiate the taking of samples of milk and get positive isolations, but the difficulty has been to get a lead on human cases. The weekly returns of the Public Health Laboratory Service are not sent to medical officers of health at the moment and this is a bone of contention, for they do not get to know of human cases although individual practitioners do. Northern Ireland and Eire are well ahead with a scheme of eradication of the disease in cattle, and we are just beginning to start a register of Brucella-free herds. We showed in the Isle of Wight in 1958–59 that there is quite a lot of human infection which is often subclinical. Dr Roden will probably confirm that notification has been a bit of a damp squib because of the difficulty of diagnostic tests, but things should improve if Kerr's method is intoduced on a wide scale. Dr J. E. Davies of Carmarthenshire also made a very valuable survey in Wales in the late 1950's.

Dr O'Brien (*Warrington*): Has the general practitioner special responsibility for screening new immigrants and their families who are accepted on to his list; if so, can you outline a programme which he might adopt?

Dr Roden: At the present time tuberculosis would take first priority, the risk to the public depending so much on the nature of the person's employment. Whether it is desirable or practicable to screen food handlers bacteriologically would depend upon whether the amount of effort involved in such screening procedures would be repaid by practical results. There is often a considerable conflict between what is desirable on theoretical grounds and what is possible in practice with regard to manpower. What are the subjects one can really select that would pay dividends in terms of public health? Tuberculosis is the outstanding one and this has been the subject of correspondence with the medical officers of health, for example, in sending lists of newly arrived immigrants to them in order that they can be followed up and screened for this particular disease. One clearly cannot screen everybody for everything.

Professor Maegraith: I would agree with that. A lot of screening has

to be done at industrial level. One of my patients with leprosy was employed in a Lancashire cotton mill and the diagnosis was completely missed, not only when he came in as an immigrant but by the doctors in charge of the factory. I do not think this is the general practitioner's job, but at the same time I think the general practitioner has to remember that it is not only the public health problem he is faced with, in most cases it is the problem of the individual that comes to see him. He ought to have a certain knowledge of the essential things that might damage that particular patient, but to ask him to make a thorough screening of coloured people with odd names is asking the impossible. It reminds me of what General Bingham said to me just after the war, when we estimated that 500,000 British troops had come back with *Entamoeba histolytica* cysts in their stools and we only had 50 beds. I asked him what to do about it, to which he replied, "it's quite simple, my boy, you don't examine their faeces".

Dr Watson: First of all, there is a purely practical problem; do you see any of the families or any member of a family who signs on to your list or do you just accept the cards through the letterbox? I try to see at least one of the family, mother or father, when the card is brought in; it is a bit more work but it makes a personal contact with the family while they are well. If I was dictator in this country I would make it obligatory for all immigrants to bring in some note of health, which it would be equally obligatory to pass on to their doctor. I was in Peaslake some time ago and saw a very severe subarachnoid haemorrhage in an *au pair* girl from Denmark; it turned out later that she was known to have a blood pressure of 200 mm.Hg when she arrived in the country.