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THREE WEEKS IN MALAWI: A LOCUM CONSULTANT EXPERIENCE

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My first arrival in Africa in 1976 had felt very different. Chauffeured with my young family from Kilimanjaro International Airport by a friend, I had pinched myself to make sure I was not dreaming as we passed Masai tribesmen striding beside the road and climbed into the foothills at the base of the mountain where I was to take up the post of medical specialist at a consultant referral hospital just outside Moshi. We reluctantly left in 1982 after six difficult but rewarding years. Now I was back again in Africa, although for the first time in Malawi.

Malawi is a comparatively small land-locked country in central Africa, and shares borders with Tanzania, Mozambique, Zambia and Zimbabwe. Twenty per cent of its area is covered by Lake Malawi and other water masses and in the 1990 census it had a population of 8·4 million, 88 per cent of whom live in rural areas. It has a high infant mortality rate and life expectancy is only 48 years. Only just over half the population have access to a safe water supply and there are 61,405 people per doctor.[1] Lilongwe, located close to Lake Malawi, is the administrative capital but Blantyre, a colonial style city with a population of 500,000, is the commercial centre and lies in the south of the country.

Queen Elizabeth Central Hospital (QECH), the largest hospital in Malawi has 892 beds and acts as the district hospital for Blantyre and regional referral hospital for the south of the country.[2] It is also the main teaching institution for the University of Malawi College of Medicine which opened in 1990. Four years previously the first batch of Malawian students who were to complete their final year in the new medical school started training at several medical schools in UK,[3] returning to Malawi in 1991 and graduated the following year. The preclinical school academic staff started to arrive in 1993 and their first intake of students commenced studies in September 1994. The hospital, on a substantial site, comprises single storey bungalow style wards connected by covered corridors. Scattered through the complex are smart, but not inappropriately plush, new university departments of medicine, paediatrics, obstetrics and gynaecology, and surgery. Establishment staff in these departments include four or five consultants of whom two carry the rank of professor. A few of these are Malawian with other posts filled by British, Dutch, Canadian, American and African expatriates.

The standard of clinical teaching in the department of medicine was excellent and it was a privilege to both observe and participate in the student teaching programme. A separately staffed and funded Malawi Research Project has an excellent programme of research, currently focussed on qinghaosu derivatives for treating cerebral malaria. By contrast with my previous experience in Tanzania, however, there are no consultants in the departments of radiology, pathology, and microbiology, and diagnostic facilities utilising these services are very limited. There is a curious mix of excellent and very poor equipment, with no opthalmoscopes on the medical wards (two of these had recently 'walked', probably to private clinics), no side room microscopes, no rigid sigmoidoscope or even

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working torches on the wards but there were excellent Olympus gastroscopes, an ultrasound machine and a good multi-channel ECG. In the public wards overcrowding is constant with a daily average inpatient population of 1,500 and the nurses struggling to cope. The pharmacy find it difficult to keep pace with the demand for drugs, demonstrated by a shortage of prednisolone (constituting a life threatening shortage for tuberculous pericardial effusion patients and others) and by running out of insulin during a diabetic clinic.

The impact of human immunodeficiency virus (HIV) infection on tropical medical practice has been immense. When I left Tanzania in 1982 we had read of the puzzling cases of a syndrome of immunodeficiency occurring in American homosexuals, including Kaposi's sarcoma, particularly intriguing to those of us working in Africa where this tumour was very common. As the characteristics and cause of the Acquired Immunodeficiency Syndrome (AIDS) unfolded over the next few years I was able to make diagnostic sense of the handful of puzzling cases of symmetrical lymphadenopathy, severe weight loss and diarrhoea, oesophageal candidiasis, more severe Kaposi's sarcoma and severe atypical pneumonias which I had seen towards the end of my stay in Tanzania. Since 1985, I had worked in Edinburgh with HIV infected individuals, mostly intravenous drug misusers and had followed the appalling statistics from Africa with concern as the HIV pandemic of sub-Saharan African unfolded. I was to discover that an apparently extensive clinical experience in Edinburgh and the reading of statistics had not prepared me for the huge scale of the HIV problem in Malawi. For the obstetrics and gynaecology and surgical departments, HIV infection is more of an incidental finding. One third of antenatal clinic attendees in Blantyre are HIV antibody positive. The medical and paediatric departments by contrast are directly and heavily affected.

In 1993 over 13,000 patients were admitted to the medical department of whom 2,461 were suffering from tuberculosis. By contrast, in 1973, admissions to the medical wards totalled only 2,300 (Harries AD, personal communication). The general medical wards are now grossly overcrowded and dominated by HIV associated disease. At times doing a medical ward round became the medical equivalent of battle casualty work in which a form of triage was vital, discharging those who did not need in-patient care as soon as possible, assessing those who were beyond salvage and then concentrating on the middle group who were sufficiently sick to justify their continued presence in the ward and for whom available diagnostic and therapeutic possibilities might achieve something. Advanced disseminated Kaposi's sarcoma, cryptococcal meningitis and suspected cerebral toxoplasmosis mostly came into the beyond-salvage group. The middle group included atypical presentations of tuberculosis, severe salmonella bacteraemia, probably mostly *S typhimurium* on the basis of previous studies in Nairobi[4] and Blantyre,[5] and bacterial pneumonia. In many, HIV infection was hitherto unsuspected, its concurrence strongly suggested by the finding of florid oral candidiasis. Some bacteraemic patients responded to chloramphenicol but multiple drug resistance has become a serious problem.[4,5] Although QECH boasts an excellent neurologist, the lack of radiological and laboratory back-up makes the diagnosis of cerebral toxoplasmosis and cryptococcal meningitis problematic. Pneumocystis pneumonia (PCP) is reputed to be uncommon in Africa although reports suggest that when facilities are more sophisticated it is identified quite frequently[6] and studies in the Gambia have established that childhood

FIGURE 1

A clinical round in the ward for females with tuberculosis at the Queen Elizabeth Central Hospital, Blantyre.

asymptomatic infection is as common as in the West.[7] My brief experience in Malawi led me to conclude that it is occurring more frequently than is realised, is often misdiagnosed and particularly since Fansidar is used for malaria and cotrimoxazole for community acquired pneumonia, many HIV patients are already inadvertently receiving at least partially effective treatment or a degree of prophylaxis. During my first week I saw two patients with classical radiological and clinical features of PCP whose clinical condition was unresponsive to chloramphenicol and who made excellent progress on high dose cotrimoxazole. The paediatricians similarly thought that they were seeing PCP in infants but lacked the facilities to prove it. Other common causes of admission included malaria, severe anaemia, bacillary dysentery and cholera, although firm diagnosis was difficult due to the paucity of laboratory facilities. On my last day a new Coulter counter came into action.

An epidemic of HIV associated tuberculosis causes grave concern and results in bed occupancies of 300 per cent in the female and 150–200 per cent in the male wards. On my first round in the tuberculosis ward it seemed that very few of the patients were HIV negative. This is one area where the HIV surveillance is fairly complete. HIV positive tuberculosis patients may develop severe life threatening skin reactions to thiacetazone[8] and on the grounds of patient safety there is a strong indication for HIV counselling and testing for all such patients. All patients receive the initial quadruple drug regime of 2 months rifampicin +pyrazinamide, +streptomycin+isoniazid, and a final 2 months isoniazid on its own. Seronegative patients receive an intermediate four months of thiacetazone+isoniazid whilst HIV positive patients receive ethambutol+isoniazid. Cur-

rently 75 per cent of the sputum smear positive tuberculosis patients, 69 per cent of smear negative patients and 89 per cent of the eighty or so patients presenting each year with tuberculous pericardial effusion are HIV antibody positive (Harries AD, Maher D, Kumwenda J, personal communication). The latter group also receive high dose steroids to reduce the frequency of pericardial constriction and tamponade, both of which I saw as lethal complications. After returning to the UK I noted a South African research paper drawing attention to the benefits of a short course of steroids in very high dose in tuberculous pericardial effusion, 120 mg prednisolone daily for one week, higher doses being needed because of the enzyme inducing effects of concomitant rifampicin.[9] High rates of HIV seropositivity are also being identified in tuberculous pleural effusion of which I also saw many during my short stay. Tuberculosis is more infectious in HIV seropositive patients and more likely to give rise to clinically apparent disease. The need for strict control of this HIV-associated tuberculosis epidemic is absolutely crucial to avoid the multiplication of resistant forms arising in Africa from where it could easily spread to other parts of the world. An incidental but minor problem of the overcrowded conditions with many HIV positive patients was scabies.

CONCLUSIONS

Malawi is a beautiful country with warm friendly people and rightly deserves the title proclaimed by its tourist board: *The warm heart of Africa.* QECH is struggling to fulfil its role as the first teaching hospital in Malawi. Some departments are swamped by HIV related illness and the hospital has progressed only part of the way toward changing its culture from that of regional hospital to one appropriate to a teaching hospital. Currently, support by governmental aid agencies, e.g. the UK Overseas Development Administration, is inexplicably being withdrawn rather than increased, thus threatening the viability of the whole project. Nelson recently observed that 'development aid is more about politics and money than about equity and caring'.[10] Unless agencies concerned for the long term needs of such nations take a strong lead the future for the College of Medicine and QECH as its main teaching institution seems bleak.

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GETTING THE BIRD

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Avian comparisons are commonplace in the etymology of clinical medicine. Thus we have the swan-neck deformity of rheumatoid arthritis, pectus carinatum, winging of the scapula, a waddling gait, and (a) pterygium of the eye.[1] From our experience of acute medical admissions in an elderly population we now draw a further avian simile which we term the 'Owl sign'.

The sign does not refer to the unparalleled wisdom of senior physicians with whom we have had the pleasure of working but rather to similarities in the acoustic profile of Owls and a certain type of patient. When approached by a doctor the patient emits a "wooowooo' noise not dissimilar to the call of the Owl, and this is associated in many cases with an acute confusional state most commonly caused by infection.

We have distilled the clinical features from case histories found in association with an Owl sign. The patient is usually female, more than seventy years of age, has a degree of visual impairment, and lives alone. Having previously managed a fairly independent existence she has become unwell over about 24 hours, and her General Practitioner has been asked to see her by her home help, a neighbour or a district nurse. She is assessed in the late afternoon and the referral letter often includes the phrases 'off her legs' and 'can't cope at home'. The patient eventually reaches the ward in the late evening when the other patients are being settled for the night and the main lights are off. It is at this stage that an Owl sign can most easily be observed. On approaching the patient there comes a low 'woo-ing' which may increase in intensity as the doctor starts to speak with her. It is difficult to elicit a history as the patient is disorientated in time and place. Examination always requires the assistance of a nurse and obtaining a midstream specimen of urine is well nigh impossible. The patient is pyrexial within 12 hours of admission, but with appropriate antibiotic treatment there is usually a rapid recovery, return to a normal state of mind, and discharge home at an early stage after some convalescence.

The sign is heard on approaching the patient in conditions of subdued lighting when her senses alert her that someone or something is close by. It is to be distinguished from the cries of anguish associated with the examination of painful parts. The Owl sign may also be elicited on the ward round the morning after admission, but its persistence to this stage suggests the wrong choice of antibiotic or a degree of chronic mental impairment.

Although the Owl sign and the call of the Owl are both heard at night, and may represent a form of communication when visual cues are less available, it is interesting to note that owls are famed for their good eyesight, whereas the Owl sign is usually observed in association with a degree of visual impairment. It is perhaps significant that the sign is often present in spinsters. Perhaps an adaptation

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