

This common stem cell is presumed to be responsible for the establishment of largely self-perpetuating lymphoid stem cell pools that occurs during very early life. Leukaemic transformation of this cell occurring during adult life, however, while able to explain the peculiarities of lymphoid blast crisis, would not be expected to produce any significant number of Ph¹-positive lymphocytes.

There are also important clinical implications in the recognition of lymphoid blast crisis. Blast crisis in CML is generally unresponsive to chemotherapy, but lymphoid blast crisis usually responds, sometimes excellently, to combinations incorporating vincristine and prednisolone.^{3-5 14} Patients with lymphoid blast crisis or Ph¹-positive acute lymphoblastic leukaemia must be identified in prospective trials of chemotherapy, as they are unlikely to do as well as patients with Ph¹-negative acute lymphoblastic leukaemia, and they respond better than patients with non-lymphoid blast crisis.¹⁵ Extension to the central nervous system has been reported¹⁴⁻¹⁶ in lymphoid blast crisis, and Woodruff *et al* now report at p 1325 two further patients who developed meningeal leukaemia during haematological remission. The increased incidence of this complication in lymphoid blast crisis may be attributed to longer survival, and these patients should probably receive prophylactic therapy, as is customary in acute lymphoblastic leukaemia.

¹ Boggs, D R, *Blood*, 1974, **44**, 449.

² Janossy, G, *et al*, *British Journal of Haematology*, 1976, **34**, 179.

³ Peterson, L C, Bloomfield, C D, and Brunning, R D, *American Journal of Medicine*, 1976, **60**, 209.

⁴ Rosenthal, S, *et al*, *Blood*, 1977, **49**, 705.

⁵ Beard, M E J, *et al*, *British Journal of Haematology*, 1976, **34**, 167.

⁶ Whang-Peng, J, *et al*, *Blood*, 1970, **36**, 448.

⁷ Forman, E N, *et al*, *Blood*, 1977, **49**, 549.

⁸ *Blood Cells*, 1975, **1**, 53.

⁹ Janossy, G, Roberts, M, and Greaves, M F, *Lancet*, 1976, **2**, 1058.

¹⁰ McCaffrey, R, *et al*, *New England Journal of Medicine*, 1975, **292**, 775.

¹¹ Hoffbrand, A V, *et al*, *Lancet*, 1977, **2**, 520.

¹² Sarin, P S, Anderson, P N, and Gallo, R C, *Blood*, 1976, **47**, 11.

¹³ Moore, M A S, *Clinics in Haematology*, 1977, **6**, 97.

¹⁴ Marmont, A M, and Damasio, E E, *Acta Haematologica*, 1973, **50**, 1.

¹⁵ Bloomfield, C D, *et al*, *British Journal of Haematology*, 1977, **36**, 347.

¹⁶ Atkinson, K, *et al*, *Cancer*, 1975, **35**, 529.

Shadow over Maltese medicine

Recent events in Malta will have saddened British doctors. Apart from the unique niche that this Mediterranean island fills in Britain's past, the links between British and Maltese medicine are close, with the medical school there modelled on those in the UK, and external examiners visiting from here. The story of the five-month confrontation between Mr Dom Mintoff's Government and the Medical Association of Malta depends, as recent correspondence in the *BMJ* has shown (22 October, p 1082; 12 November, p 1285), on the teller. The BMA has had no doubts, firmly supporting its sister association since the dispute started.

As the honorary secretary of the MAM stated in his letter to the *BMJ*: "... The current dispute arose ... out of disagreement over new legislation affecting newly qualified doctors and the powers of the Medical Council. In protest, the MAM directed its members to take limited action involving outpatient clinics and non-urgent surgical operations, while continuing to provide the necessary cover for emergencies.

"The Maltese Government reacted by ordering a lock out of

doctors and specialists from all State hospitals and by importing foreign doctors from Libya, Czechoslovakia, Pakistan, and the Palestine Liberation Organisation to man emergency hospital services. Within a few days punitive legislation was rushed through parliament prohibiting the Maltese doctors and specialists from practising in private hospitals. Further legislation culminated in their dismissal not only from their government posts but also, in some cases, from their university appointments. The latter included the professors of medicine, surgery, and obstetrics and gynaecology."

The World Medical Association at its recent Dublin meeting¹ discussed the Malta crisis at the request of the BMA delegation. As a result, Dr P A Farrelly, president of the WMA, and Mr Walpole Lewin, chairman of the WMA Council, visited Malta in an effort to mediate. Their report (p 1368) is a masterpiece of discretion and they must be gravely disappointed at having come so close to success.

While UK doctors have ample experience of arbitrary Government decisions, nothing in the history of the NHS so far can have cast a gloom comparable to the present shadow over Maltese medicine. Final year medical students have been forced to move abroad to complete their exams and other medical students obliged to do routine cleaning chores in the hospital as part of their "training," in line with the Malta Government's ideological concept of student "workers." The standards of the profession are now subject to direct Government interference, with the registration body vulnerable to the whims of politicians. We all know the consequences for the professions of totalitarian regimes. Ironically, Malta, which won its George Cross helping to fight such tyranny, seems to be treading that same dangerous path. But how many people realise that Malta is in the queue for membership of the EEC? Furthermore, if the forecasts of Brussels bureaucrats are borne out, the odds are in favour of Malta's joining the Nine. Whether this unhappy medical episode would have been averted if Malta had already been a member is arguable, but, judged by its behaviour over this one issue, will the island's present Government be a comfortable bedfellow for the other EEC democracies? Brussels may have to think again.

What practical help can British doctors give to their embattled colleagues? Firstly, they can support the appeal launched by Dr J C Cameron, Chairman of BMA Council (10 September, p 708), to help the 40 or so Maltese medical students who have come to Britain to complete their studies. Secondly, they can give moral support to the WMA in any further efforts to mediate in the dispute. Thirdly, they can warn anyone thinking of holidaying or convalescing this winter in Malta's pleasant climate that the medical services there may not quite be what they were. Finally, they might ponder the implications for professional freedom in their own country.

¹ *British Medical Journal*, 1977, **2**, 779.

Schistosomiasis in China

Schistosomiasis is the only communicable disease in the world whose prevalence is increasing—despite the enormous amount of time, energy, and money being spent on it.

Eggs passed in human urine or stools hatch when they enter water into freely swimming miracidia, which for a few hours only can infect certain fresh-water snails. Cercariae develop in the liver of the snail, and are shed for the rest of its life; in turn, they can infect man, again for only a few hours,

being able to penetrate skin that comes in contact with the water. In man the cercariae turn into young schistosomes after developing in the liver. After some six weeks the male and female migrate together down the portal vein to the small tributaries surrounding the gut, in the case of *Schistosoma haematobium* travelling by an unknown route to the venous plexus surrounding the urinary tract; there eggs are laid and the cycle is completed.

Theoretically the disease may be controlled by interrupting this cycle at any point—that is, by reducing contamination of water by urine and stools; reducing the snail population; giving drug treatment sufficient at least to stop egg laying by female schistosomes; or reducing contact with infected water. In practice, however, simultaneous attacks at different points in the cycle have so far failed, partly because of the greatly increased use of irrigation in food production. Thus the prevalence of schistosomiasis increased after the construction of the Aswan Dam in Upper Egypt, the Volta Dam in Ghana, and the Kariba Dam on the Zambesi. In particular, cultivation of rice tends to favour transmission because workers are inevitably in close contact with water, and China (where the schistosome type is *S japonicum*) has been one of the most severely affected areas of the world. There the large reservoir of infection in domestic and non-domestic animals adds to the difficulties of control.

Visitors to China have reported a greatly reduced prevalence of schistosomiasis in recent years. A recently published translation of a Chinese handbook on schistosomiasis¹ gives recommendations on prevention and treatment. Methods of control are grouped under elimination of snails; treatment of manure (both human and animal); provision of safe drinking water and avoiding contaminated water when bathing; and treatment of infected patients and animals. There is no mention of mass chemotherapy.

All measures are centred on the commune and production teams, and the handbook always gives the impression that recommendations will be carried out without question or default: all that is needed is an understanding of the importance of the work and encouragement to carry it out. There is a striking disregard for or nonchalance about the massive labour demanded by many of the recommendations. For example, snail-containing mud from the walls of a drained canal must be buried in a trench dug into its base, and existing canals should be filled in and new ones dug; molluscicides seem to play only a minor part. Cesspools have to be dug for human manure destined for use as fertiliser and compost made—tasks that “require the attention of designated personnel”; and boatmen have to empty their manure in containers along the banks of waterways—regulations all needing discipline and obedience.

A large section of the handbook concerns the treatment of patients, including the management of its side effects. Some treatment seems strange, such as the use of oral antimony; but the details of a patient's regimen are decided only after careful consideration of the stage of the disease and the state of the patient. Treatment for side effects ranges from powder derived from a ground-up roasted toad for lassitude and anorexia to corticosteroids for acute severe reactions and insulin hypoglycaemia for functional neurasthenia. “Concrete analysis of concrete conditions” and “adaptable and changeable strategy and tactics” should be the general principles of treatment.

There are many references to what must be the Katayama syndrome—the generalised illness during the invasive stage of the infection. Clearly hepatitis is very common, and we wonder how much of it is due, as claimed here, to the antimony

preparations, which elsewhere do not commonly produce liver damage, and how much to viral hepatitis.

No mention is made of the prevalence of schistosomiasis in the past or of any reduction produced by preventive measures. Possibly the population can be persuaded to change their habits and expend great labour merely by explanation and encouragement, for the good of the people. If the measures really are carried out it will be interesting to see whether they reduce transmission of the disease.

¹ *Handbook on the Prevention and Treatment of Schistosomiasis* (translation of a Chinese publication). Bethesda, US Department of Health, Education, and Welfare, 1977.

Potential rabies

In 1970 33 people were treated prophylactically in Britain after presumed exposure to rabies abroad. By 1976 the number had risen¹ to 183. Why the increase? True, more Britons travelled abroad in the 1970s than ever before, and rabies is moving inexorably westwards in Europe year by year, but there must be other explanations for the sixfold increase in the numbers treated. The reasons include a greater public awareness of the risk of contracting rabies from an animal bite (which in turn springs from the campaign² to stop the disease entering the United Kingdom) and the development and availability of more effective vaccines.³ By fortunate circumstance the incubation period of rabies is long enough (generally 20-60 days) to make active immunisation with vaccine feasible after exposure to the virus.

As usually presented to the doctor, the predicament is that of a person who has recently entered or returned to Britain and who has been bitten or licked by an animal (usually a dog or cat) while abroad. At the time or subsequently this animal may have behaved abnormally or at least suspiciously. The decision to vaccinate or not depends on an assessment of the risk, and this hangs largely on having as accurate and detailed an account of the episode as possible. It is usually easy to find where on the geographical map the bite occurred and probably the exact date and the degree of exposure—whether it was a frank bite or a lick. Rabies is said not to enter through unbroken skin, but the exposure of an abrasion to saliva can transmit the virus, and patients who had even casual contact with a rabid animal may request vaccination. The behaviour of the animal concerned may be more difficult to determine, as may any information about its subsequent fate on investigation, but this is crucial information. A synthesis of all these factors provides the final estimate of the risk of rabies, from which in each case a decision has to be made about prophylaxis.

Few places outside the United Kingdom may be taken reliably as being free from rabies, though some island countries including Iceland and Australia are protected, like Britain, by the sea. Any bite by a mammal—but in particular a dog, cat, or fox—in most places on the earth prompts serious consideration. The fact that the animal has bitten without provocation may argue strongly for rabies, but more precise information is desirable—in particular, it is helpful to know whether the animal was alive ten days later, since after that period the animal may safely be assumed not to have been infectious at the time when it bit. Such information may, however, be difficult to gather retrospectively from abroad. The animal may have been killed and its brain examined for rabies antigen, in which case a definite positive diagnosis may have been made.