diabetic children admitted to homes in England and Wales that they "appear to require the care and training provided in a special boarding-home."

The efforts of a trained diabetic child may, however, be thwarted by an ignorant parent. They are certainly strengthened by the help of an informed one, and provision has been made at "Cruachan" for the admission of parent and child for training courses. There the parent can deal with insulin, prepare and serve diet, see and deal with hypoglycaemia, and observe all the things that make for a happy and active diabetic life. The child will also learn about diet, insulin, and exercise, and all in the context of a normal life in which he will go to local schools and join fully in games and hobbies.

Because of its helpful economic effect by minimizing hospital admission and readmission, the scheme may attract financial support from the National Health Service sources—though such a possibility has still to be negotiated.

This service for the diabetic child will also be available at "Cruachan" for children with other conditions which are treated by carefully constructed diet—for example, gluten enteropathy and phenylketonuria—when parents cannot or will not manage the problem themselves.

Those interested in the service provided by "Cruachan" and who wish for further information about it should write to Regional Executive Officer, Dr. Barnardo's (Scotland), 22 Drumsheugh Gardens, Edinburgh 3.

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CONFERENCES AND MEETINGS

Tropical Medicine

[FROM A SPECIAL CORRESPONDENT]

A conference on Tropical Medicine was held on 2 and 3 June at the Royal College of Physicians, London.

Professor A. W. WOODRUFF (London) opened the session on "Malaria" by discussing unusual presentations of the disease. He pointed out, however, that it was not the uncommon presentations but the unfamiliarity of doctors with the common presentations which delayed diagnosis and led to the four or five preventable deaths and cases of severe illness in Britain each year. The irregularity of the fever in falciparum malaria was sometimes misleading, particularly if the doctor did not pursue the question of where the patient had been, not only recently, but in the last year or so. All patients with a fever who had been in the tropics should have a blood film examined even if it put an extra strain on the pathology laboratory. Renal failure was another mode of presentation in non-immune patients, while blackwater fever was much less common now that quinine was seldom used therapeutically—though it had to be remembered that both tonic water and tinned grapefruit juice contained added quinine. In immune patients the disease could occur with deceptive mildness. The persistence of malaria could lead to recipients of blood from infected donors presenting unexpectedly with the disease. Although *Plasmodium falciparum* had no exoerythrocytic cycle, it could maintain itself in the blood for as long as 18 months. The length of survival of the exoerythrocytic forms of the other species of plasmodium also encouraged persistence of the disease—in *P. ovale* for up to nine months, in *P. vivax* three years, and in *P. malariae* up to 20 years.

Dr. I. A. MCGREGOR (Medical Research Council) outlined the techniques at present available for the study of the immunology of malaria. Antibodies had been detected by complement fixation; these were short-lived, and their presence suggested current or recent infection. The indirect haemagglutination test was group-specific but might give false-positive results. Immunofluorescent techniques were a great advance, but the gel-diffusion technique of Ochterlony was even easier, quicker, and reasonably permanent. Even stronger reactions were obtained with it when schizont extracts were used as the antigen rather than extracts of free forms. Further work was in progress to identify antigens and to see whether they changed during the course of the life cycle of the parasite. A high-molecular-weight antigen fraction had been detected free in the serum and Dr. McGregor speculated whether this might play a part in some of the complications of malaria—such as big-spleen disease, profound anaemia, and the nephrotic syndrome.

Malaria and Nephrotic Syndrome

Investigating the possibility of an association of the nephrotic syndrome with *P. malariae* infection, Dr. H. M. J. GILLES (Liverpool) had found the incidence of the latter to be higher in children with the syndrome in Ibadan than in children who had other illnesses or who were well. On the other hand, *P. falciparum* was the commonest infection in the general population. Nephrosis was commoner in Ibadan than in areas where *P. malariae* infections did not occur, and the age of onset was usually about 5 years—rather than in younger children, as was seen in Western countries. The prognosis of the disease was worse than elsewhere, and the response to corticosteroids or to antimalarials was poor. In the discussion Professor R. G. HENDRICKSE (Ibadan, Nigeria) said that his paediatric unit was very keen to separate children with the nephrotic syndrome thought to be due to *P. malariae* from those with the sporadic idiopathic disease. In the latter the prognosis was much better, while the response to treatment was reasonably good.

Professor B. G. MAEGRAITH (School of Tropical Medicine, Liverpool) emphasized that "Quo Vadis?" was an essential question for doctors to ask patients so that proper prophylaxis could be provided, not only for malaria but for other preventable conditions. This, he said, was particularly important in student health services, since he had seen students return from abroad with numerous infections which were entirely unnecessary.

Visceral Leishmaniasis

Brigadier J. P. BAIRD (Royal Army Medical Corps) described the varied presentations of visceral leishmaniasis or kala-azar. From 1945–1965 few cases had been seen in Servicemen, though both the visceral and cutaneous forms had been seen since troops had been in action in the Radfan mountains north of Aden. The phlebotomus sandfly—which had fairly stringent climatic requirements—nevertheless succeeded in living in the caves and ruined buildings of this area and maintained a source of the parasite from dogs. In taking cover and digging in at night the troops had found themselves sharing the sandfly's environment. The incubation period of leishmaniasis after infection was usually three to six months, though it could be as short as ten days or as long as two to ten years. In men who had been in Aden 12 cases had now been seen, presenting in England, Germany, and Hong Kong. The onset was usually insidious but was sometimes acute with a high fever. Symptoms and signs were usually non-specific, though in spite of fever and weight loss the tongue was clean, the appetite unimpaired, and mental alertness retained. The white count was low, often less than 1,000 per cu.mm. Antibodies could now be detected by immunofluorescent techniques, while the finding—in material aspirated from the spleen, lymph nodes (if enlarged), or bone marrow—of Leishman–Donovan bodies was diagnostic. Brigadier Baird had found that splenic biopsy with a Menghini needle was safe and superior to aspiration with a narrower needle, as it provided material for both histology and culture. Treatment with sodium stibogluconate was

successful and should precede any blood transfusion, because anaemia recurred very quickly in the untreated patient. In the acute illness the anaemia was associated with hyperplasia of the bone marrow; later a megaloblastic picture was seen, and radioactive chromium studies had shown that a haemolytic element was also present.

Cutaneous Leishmaniasis

The cutaneous form of leishmaniasis was described by Colonel R. M. HENDERSON (Royal Army Medical Corps), who had seen this form in 40 patients from Aden and 2 from British Guiana when British troops were posted there. After inoculation the incubation period was shorter if the number of organisms was large—though it still varied from a few days to two years. The first lesion was a macule, and this grew slowly into a painless non-irritating papule and a scaling erythematous patch, which easily ulcerated if the scales were removed. With secondary infection there might be slight pain and some local lymph node enlargement. Smears from the base or sides of the ulcer revealed bodies of *Leishmania tropica* in some cases, but the Montenegro skin test was more reliable. Colonel Henderson considered that local injections of mepacrine was the treatment of choice unless the lesion had already broken down, when he used diathermy. In severe cases injections of pentavalent antimony were effective.

Dr. W. H. JOPLING (London) said that he used more than the textbook dose of antimony and got better results by giving biweekly doses intravenously for nine weeks. Professor Woodruff used no local therapy except tulle gras, but agreed that intravenous therapy was impracticable for large numbers—for example, as might be seen in Iraq. Dr. J. H. WALTERS (London) pointed out that the distribution of leishmaniasis around the Mediterranean corresponded well with holiday areas, and he had recently seen a patient in London with the disease contracted in the South of France.

Tropical Sprue

Dr. S. J. BAKER (Vellore, India) defined tropical sprue as a primary malabsorption syndrome occurring among residents in the tropics, pointing out that it had been seen in India for centuries in both endemic and epidemic forms. Dr. Baker had investigated the epidemic occurring in Madras in 1960, which had probably affected 150,000 people. The disease was commoner inland and petered out towards the sea. Individual villages had shown a random distribution of patients and no apparent relationship to diet, source of water, wealth, type of house, or source or type of cooking oil. The incubation period seemed to be five or six days, but all bacteriological and viral studies were negative. Of the untreated cases a third had died—from dehydration, electrolyte imbalance, secondary infection, anaemia, or hypoproteinaemia—particularly those among the youngest and oldest age groups. Even with treatment 10% of patients had still had diarrhoea after 12 months. Antibiotics might improve the absorption of vitamin B_{12} (which was invariably impaired), though folic-acid absorption remained normal and giving folic acid had no therapeutic effect.

Colonel W. O'BRIEN (Queen Alexandria Military Hospital, London) had studied 64 cases of tropical sprue. Diarrhoea was the presenting complaint in only 30%, the remainder having a variety of vague symptoms including anorexia, lassitude, depression, and intolerance to alcohol. Nevertheless, the uniformly impaired absorption of fat, xylose, and vitamin B_{12} was characteristic.

Bilharziasis

Dr. P. JORDAN (Ministry of Health, West Indies) said that the eradication of malaria in many areas was revealing the true incidence of bilharzia. The evaluation of drugs in man was not easy because criteria of improvement or even of cure were not well established. The concept of egg load in the faeces or urine was the only quantitative one in use, and this was affected by many variables. Evaluation of side-effects was also important for drugs whose clinical efficacy was much the same. Stibocaptate appeared to be effective, while the new nonantimonial oral drug niridazole (Ambilhar) achieved a higher concentration in schistosoma ova than in any tissue of the host except the gastric mucosa.

Reviewing the diseases referred to the Hospital for Tropical Diseases in London, Dr. A. C. E. COLE (London) had found that half the patients were from European areas and only half from the tropics. The largest group had diseases of infective and parasitic origin; amoebiasis was rarely acute—the majority of patients being cyst passers—while giardiasis caused as much trouble and presented as a gaseous diarrhoea. Schistosomiasis was usually mild, though full investigation of the urinary tract sometimes revealed extensive damage. Tuberculosis was seen in many guises, particularly as pyrexia with adenitis, and a blistering tuberculin reaction should lead to suspicion. Trypanosomiasis of the insidious gambiensis type had been seen after being unrecognized for up to three years in Britain, and in one instance had been diagnosed on brain biopsy for a suspected tumour. Two cases of histoplasmosis had also been seen.

Diagnosis of Leprosy

Dr. W. H. JOPLING (London) said that in Britain leprosy was likely to be seen fairly late in its course, and it might present to a variety of specialists. The neurologist saw cases where neural lesions were primary and skin lesions slight. Nerves were palpable and sometimes tender. The association of trigeminal and facial palsies was suggestive, and trophic ulcers were painless. The dermatologist might be consulted about lesions almost anywhere on the body, except on the scalp, axillae, groins, or perineum. The general physician might see leprosy as oedema of the legs and feet, or erythema nodosum which was evanescent and recurrent on the face, arms, back, or thighs. Patients might also consult the eye surgeon or the otorhinolaryngologist. Loss of the upper central incisors—usually the last teeth to be affected by caries—might alert the dental surgeon to the possibility of leprosy.

Dr. D. S. RIDLEY (London) emphasized that proper fixation of skin biopsy specimens was essential in the histological diagnosis of difficult cases of leprosy, where bacilli were virtually absent. A clear subepidermal zone was characteristic, but the granulomas seen were similar to those in other conditions. Lymphocytic infiltration of nerve fibres was a helpful sign, and could sometimes be detected by special staining.

Dr. R. J. W. REES (National Institute for Medical Research) said that, though *Mycobacterium leprae* had still not been cultured in vitro, leprosy research had been transformed since 1960, when the first successful infection of laboratory animals had been done in the mouse foot pad. It had proved possible to titrate drugs against the infections produced in the mouse foot pad. Efforts to enhance foot-pad infections in mice by thymectomy together with x irradiation had also been successful, and had been prevented by the pre-infusion of competent lymphocytes.

Problems of Management

Dr. S. G. BROWNE (Leprosy Study Centre, London) pointed out that 50 new cases of leprosy were being notified in Britain each year, though no patient had yet been shown to have acquired his infection in this country. Nevertheless, more doctors would be called on to diagnose and manage leprosy in the future, and a Ministry of Health Leprosy Panel was already available to give advice. Many of the problems involved would be psychological and social. Thus viable bacteria were shed for the first six to nine months of treatment, and during this time the patient should ideally have his own bedding, crockery, and cutlery; he should not work in catering or with children, even though the importance of fomites had not yet been established. Deformities and disfigurement might affect both the capacity for work and acceptance by workmates, though considerable improvement of deformities was possible from treatment. Dapsone was the mainstay of drug therapy, and much smaller doses had now been found to be effective (about 100 mg. per week). At least two years' continuous treatment was needed for the lepromatous patient, but four years' was necessary for the indeterminate and borderline cases. Annual follow-up with smears was required after treatment was finished, because bacteriological relapse preceded clinical relapse, often by many months. Finally Dr. Browne advocated B.C.G. vaccination for contacts, and suggested that dapsone might have a role in prophylaxis.