CONFERENCES AND MEETINGS

First African Symposium on Bilharziasis

[FROM A SPECIAL CORRESPONDENT]

Of all medical problems which Egypt faces schistosomiasis is the greatest. It affects at least 37% of the country's 32 million population, and Professor AHMED MOUSTAFA, Minister of Scientific Research, in opening the First African Symposium on Bilharziasis, which was held in Cairo between 8 and 14 February, stated that the annual economic loss caused by it in Egypt was about £100m. Moreover, it was a major cause of admission to hospital and of chronic incapacity among those not treated early.

During the proceedings Dr. MOHAMED SAID KADRY (Arab State Training Centre for Education for Community Development) stated that the attempts to control the disease in the field had so far been a failure, and emphasized that health education did not mean action by the community—a point health educators often forgot. One of the great needs at the present time was to prevent the spread of the disease into areas reclaimed from the desert. The extent of these areas was now considerable as a result of the building of the high dam at Aswan and the consequent increase in irrigation. Large-scale treatment had, however, reduced the overall incidence of schistosomiasis from 54% in 1950 to 37% at present.

Professor A. HAFIZ MOUSA described the experience with the Gizira scheme as a warning of what might happen after the building of the Aswan dam. Before the building of the Senna dam schistosomiasis had been virtually unknown in the Gizira plain. Nevertheless, in spite of active measures against the snail vectors, both *Biomphalaria* and *Bulinus* were now well established, and the incidence and mortality from the disease had steadily risen, the former being at least one quarter of the population at present, and it was still rising. Meanwhile the population in the area had risen from 16,000 to more than 500,000.

Clinical Aspects and Control Methods

Clinically the disease presented many problems. Most of the haematological manifestations were reversible after splenectomy, but the mechanism of hypersplenism was not yet elucidated. The bronchopulmonary form remained a problem, since its clinical differentiation, from other common lung affections, was still not clearly defined. Malignancy, especially of the urogenital tract, was common in schistosomiasis, but statistical data on this relationship were difficult to obtain. Application of the ordinary diagnostic methods on a community basis revealed only a few of those infected. Finally, even under the most favourable circumstances, control measures were capable of inducing only a reduction in transmission.

Studies, using intravenous pyelography in patients with *Schistosoma haematobium* infections, presented by Dr. R. W. FORSYTH indicated that the prognosis in these patients was often poor and that renal function might be gravely impaired.

Egyptian surgeons have much experience of the bladder deformities caused by schistosomiasis, and several studies were presented showing that the contracting bladder is revealed by a typical "bull's horns" deformity on pyelography. In this the ureters are seen to emerge from the upper surface of the small, contracted bladder instead of joining it inferoposteriorly. Much work is being done on bladder reconstruction using isolated segments of ileum and rectum.

Sessions were devoted to chemotherapy and control. Tartar emetic continues to be the most widely used drug in Egypt (1½ tons—1,524 kg.—being used annually) but the use of niridazole is increasing. The limitations of antimony are well worked out, those of niridazole less so, but Dr. F. FONTANILLES reported that contraindications to the latter

included liver disease, poor general conditions—especially anaemia, hookworm disease, and tuberculosis—and those with a neurotic or psychotic history. In mass treatment niridazole was most successfully used among children with *S. haematobium* infections. Dr. KORSHED BASMY reported work indicating that patients with a history of liver or neurological disorders should not have niridazole therapy.

New Trends in Control

Professor ABD EL-HAMID ALY ATA (University of Cairo), reviewing new trends in schistosomiasis control, noted with disquiet that the geographical extent, prevalence, and intensity of schistosomiasis were on the increase. Control depended on mass chemotherapy, snail control, environmental and sanitary engineering, and health education. He paid tribute to the late Professor George Macdonald, of London, for his work on mathematical models of schistosomiasis, which had greatly facilitated control. In mass chemotherapy antimonials still occupied pride of place. Snail control by molluscicides remained costly; thus more research was needed into biological methods of control. Protected swimming-baths within canals were a new idea which might prevent much indiscriminate bathing in infected water.

Among the recommendations of the symposium was, firstly, that it is "evident that the combat of this disease is possible if financial facilities are available on a local or an international level." Secondly, pathological studies of schistosomiasis using large animals were needed; and, thirdly, standardization of the stages of the disease and the assessment of cure. Lastly, regional laboratories should be established in groups of African countries for studying the disease.

NEW APPLIANCES

Portable Electrically Heated Gloves

Dr. DAVID R. M. STUART, general practitioner, Great Yarmouth, writes: A man aged 62 began to suffer from Raynaud's phenomenon in all limbs in April 1962. During the winter of 1962-3 it was increasingly severe, particularly in both feet. Good peripheral pulses were palpable and he was referred to hospital, where a bilateral lumbar sympathectomy was performed in May 1963. The feet were greatly improved and he consequently had a bilateral cervical sympathectomy in October 1963 with considerable temporary improvement.

By December 1964 the fingers had relapsed severely and even slight exposure to cold gave rise to prolonged cyanosis. He was

referred to the Hammersmith Hospital, where a diagnosis of the cold agglutinin syndrome was established. He was treated with penicillamine and a variety of vasodilator drugs without any effect, and by 1965 the question of electrically heated gloves was considered, as it was only by the maintenance of a temperature of 90-100° F. (32.2-37.8° C.) that agglutination could be prevented.

With some difficulty a pair of gloves (see Fig.) was obtained by the hospital, powered by portable lead-acid accumulators. These were worn in a belt around the waist and were immediately found to be unsuitable, as the rate of discharge caused excessive gassing with release of sulphuric acid which damaged

the supporting belt and the patient's clothes. The question of using rechargeable batteries of the nickel-cadmium type was considered, and the help of a local company of electronic component manufacturers, Erie Electronics Ltd., was enlisted.

These cells have the following advantages: (1) little gassing, (2) ability to withstand heavy discharge currents, (3) minimal maintenance, and (4) long life. Their disadvantages are: (1) cell voltage of 1.2V per cell against 2V per lead-acid cell—that is, for 12 volts, 10 cells against 6; (2) no saving in weight; and (3) difficulty of charging.

The main problem that had to be overcome was the provision of the necessary charging

equipment. Nickel-cadmium cells require a constant current charger, and therefore a standard battery charger (car or motorcycle) will not be effective. The firm's apprentices

Photograph of electrically heated gloves.

eventually managed to design and build a constant current supply. This system proved satisfactory and has now been used for over a year by the patient.

In ordinary use, including boosting when necessary, the gloves provide heating for up to five hours of use each day and are recharged overnight. As they are not needed indoors or in bed, this is quite adequate. Tests in a refrigerated compartment at an ambient temperature of 32° F. (0° C.) showed that the gloves maintained a skin temperature of 112° F. (44.4° C.) when on boost and 72° F. (22.2° C.) when on the lower running current. This is quite adequate, but in extremely cold weather it might be advisable to insulate the gloves exteriorly with outer gloves to reduce current requirements.

Cold agglutinins in the blood are rare and the cause is unknown. There is no known curative treatment. Symptomatic treatment by warming the extremities to about body temperature is important to prevent digital gangrene. In other conditions giving rise to secondary Raynaud's phenomenon, especially scleroderma, heated gloves may well prove to be a valuable symptomatic treatment.

EQUIPMENT MANUFACTURERS

Gloves.—Vacuum Reflex Ltd., Prestige House, 50 Coombe Road, New Malden, Surrey.

Nickel-cadmium Cells (sintered cadmium type, 1.2V, 7AH) (Ex. W.D.).—Obtainable from Service Trading Co., 57 Bridgman Road, London W.4.

New Nickel-cadmium Cells (DEAC).—Obtainable from G. A. Stanley-Palmer Ltd., Elmbridge Works, Island Farm Avenue, West Molesey Trading Estate, East Molesey, Surrey.

Silver Zinc Cells—Type H 10.—Venner Accumulators Ltd., Kingston By-Pass, New Malden, Surrey.

Constant Current Charger.—Obtainable from Cadmium Nickel Batteries Ltd., Spedant Works, Park Royal Road, London N.W.10.

I would like to thank Mr. H. A. McDonald, of Great Yarmouth General Hospital, and Mr. Peter Martin, of the Hammersmith Hospital, for their help in the management of this case. The rechargeable nickel-cadmium battery system was developed by Messrs. John Self, Rodney Myall, and Brian Troise, apprentices of Erie Electronics Ltd. (Great Yarmouth), for whose help, and the co-operation of the management, I am grateful.

Modified Needleholder for Microsurgery

Dr. R. D. ACLAND, surgical registrar, Princess Margaret Hospital, Swindon, writes: The delicacy of a needleholder is limited by the coarseness of the movements required for gripping and releasing the needle. In the modified Barraquer's needleholder described here these movements are controlled pneumatically by a foot pedal. The instrument can be held in the same position as a pen, and the hand can concentrate on fine movements.

The instrument is held closed by an elastic net, made by cutting slits in a 1-cm. length of the butt of a latex Foley catheter. This net encloses the balloon of a No. 20 Foley catheter, which is inserted between the arms

of the instrument. The whole of the catheter is cut away except for the balloon in continuity with its side-tube. Fig. 1 shows the instrument partly assembled.

The side-tube is connected by a length of transfusion tubing to a 10-ml. syringe. The syringe is held in a foot pedal (Fig. 2) with the piston fixed and the barrel movable. The hinge of the pedal is placed 10 cm. in front of its heel end so that the pedal can be moved in either direction by plantar flexion and dorsiflexion at the ankle. Plantar flexion causes the jaws of the needle holder to open. The pedal is constructed so that the stroke-volume delivered by the syringe is 6 ml. The piston and tubing contain water, the quantity

being adjusted so that the top of the water column is 15 cm. from the top of the tubing with the syringe closed. The valve on the Foley side-tube enables the balloon to be primed with a few millilitres of air before being connected to the transfusion tubing.

No originality is claimed for the principle of this device (Buncke and Schulz, 1966). It has the merit, however, of being easily made from parts readily available and of being extremely effective in action.

I wish to thank Mr. D. J. Drury for the photographs.

REFERENCE

Buncke, H. J., and Schulz, W. P. (1966). *Brit. J. plast. Surg.*, 19, 15.

FIG. 1

FIG. 2