

cases. Physically there is a polyneuritis with absent tendon reflexes and marked tenderness on pressure over nerve trunks. These conditions result from a thiamin (vitamin B<sub>1</sub>) deficiency, which arises from diminished absorption of thiamin due to an alcoholic gastritis, loss of food as in vomiting, or from lack of vitamin B<sub>1</sub> in some invalid diets. It would seem that the cases of head injury in which the psychosis occurs often give a history of chronic alcoholic habits.

Treatment consists in the administration of thiamin in sufficient doses. It can be given as baker's yeast, half an ounce (15.5 g.) three times a day, or in tablets in synthetic form in doses up to 3,000 international units daily. Thiamin can also be given intravenously in acute conditions up to 32,000 international units at one injection.

If the psychosis is of considerable standing a residual dementia often remains after peripheral nerve lesions have been cleared.

#### Wernicke's Encephalopathy

This condition is mentioned, as it has been regarded as an effect of alcoholism. It can occur with any long-continued deficiency of thiamin in the diet, and should be thought of where there are gross psychological upsets in chronic diarrhoea, hyperemesis, or carcinoma of the stomach. Acute excitement suddenly occurring in a person of alcoholic habits with neuritis and ocular signs such as nystagmus is suggestive of this encephalopathy.

Treatment consists in giving thiamin at once in adequate doses.

#### Neoplasms

Space-filling lesions within the skull may give rise to symptoms of an early dementia. Intellectual deterioration, loss of memory, apathy, and disturbances of consciousness and sleep are frequent. In frontal tumours there can be antisocial conduct and an absence of wisdom and moral sense which leads to unfortunate behaviour characterized by lack of restraint and discrimination. In the case of frontal tumours such changes in personality and intellect are not necessarily accompanied by florid neurological signs and symptoms, such as headache, vomiting, and papilloedema. The practitioner is well advised, when confronted with symptoms suggesting an early dementia in persons between 30 and 55 years of age, to think of a possible neoplasm.

Treatment, of course, consists in accurate localization and surgical removal of the tumour when possible.

#### Trauma

Serious head injuries involving destruction of cerebral tissue can lead to a great reduction in intellectual efficiency. This deterioration may end in a progressive and early dementia, particularly in those cases complicated by post-traumatic epilepsy. It is important to have the degree of deterioration measured accurately by one of the recognized batteries of intelligence tests. Thus, in the treatment and rehabilitation of such patients the reduced capacity for intellectual work should be known to the patient and to the officers of the Ministry of Labour who have the task of finding suitable employment.

When early dementia appears as a late effect of a head injury common-sense measures are as effective as the more specialized approaches of psychiatry. Reassur-

ance, occupation within the limits of capacity, and instruction of the family of the patient in his management are the essentials which can be undertaken by the practitioner. Such patients require much tolerance on the part of others, and to keep them at their occupation may require indulgence on the part of doctor, employer, and relatives. Some cases are reduced to "pottering" about garden and house, carrying out simple menial tasks. Alcohol should be forbidden, sleep should be assisted if necessary, and careful use of anticonvulsants should be prescribed where epilepsy is an additional complication.

### THE NUFFIELD ENDOWMENTS

The sixth report of the Nuffield Foundation<sup>1</sup>—the largest endowed charity of its kind in Britain—contains a note of warning. A decrease in State spending upon some social and intellectual purposes may be inevitable in the years immediately ahead, and this will mean that bodies like the Foundation may be faced with difficult decisions between, on the one hand, sustaining even such minimum activities as may be endangered by enforced public retrenchment and, on the other, encouraging new proposals which must, in the sharpening competition for scarce support, find it even more difficult to command a hearing.

Meanwhile the report is a record of continuing benefactions, especially in support of biological and sociological research. In the medical field it has never been Nuffield policy to subsidize work on specific diseases, with the single exception of chronic rheumatism. On this rather unrewarding research it spent large sums at a time when the subject was as unscientific as it was unfashionable. With the advent of cortisone there has been no shortage of medical and other scientists to work upon the new clues, but at first there was a shortage of the expensive American products for test. Some months ago Merck and Company, Inc., made a gift of one kilogram of cortisone jointly to the Medical Research Council and to the Foundation for scientific purposes and trial in Great Britain, and a joint committee of the two bodies has been set up for the allocation of this gift. Grants have also been made during the past year for a survey of the incidence of rheumatism in East Anglia, for a study of tendons, cartilage, and tissue components and their structural organic chemistry, and for an attempt to synthesize cortisone from ergosterol. The Foundation has also financed an objective assessment by the British Orthopaedic Association of over 2,000 patients who have had surgical treatment for osteoarthritis, and grants to clinical units at London, Edinburgh, and Bath have been renewed for a second year.

Many fundamental biological and social studies have been assisted. Several years ago in the Department of Child Health at the University of Durham a study of infant mortality was undertaken, and afterwards this was extended to a study of morbidity as well. The investigation, which began with the study of a thousand Newcastle babies, has become the study of a thousand families, and the Foundation is further meeting the salary of an additional whole-time worker who will specialize in a combined epidemiological and bacteriological investigation. A grant of £1,000 a year for five years has been made to the Physiological Department of the University of Cambridge with a view to furthering certain advances in neurophysiology. Another has been made to the Department of Chemical Pathology at University College Hospital Medical School for the investigation of problems relating to the pyrrole pigments (including haemoglobin and porphyrin) in health and disease.

A new medical fellowships scheme, with preference for those wishing to train for teaching or research in child

<sup>1</sup>The Nuffield Foundation. *Sixth Report*. 1951. Oxford University Press.

<sup>2</sup>Oxford University Gazette. Supplement to No. 2706. June 15, 1951. 6d.

health, industrial health and social medicine, psychiatry, or chronic rheumatism, was inaugurated during the year, and four fellowships have been awarded out of eighteen applicants. Ten Dominion travelling fellowships in medicine were awarded during the year to students from Australia, Canada, and the other Dominions, enabling them to study in Great Britain for one year.

A large section of the report is occupied with the work which the Nuffield Foundation has undertaken on behalf of the aged. It is stated that during the past five years the Foundation and the National Corporation for the Care of Old People which it sponsored and helped to endow have assisted by grants the establishment of 150 homes providing accommodation and care for over 3,000 old people. The change in the age-composition of the population is calling with increasing urgency for some diversion of medical research to deal with degenerative disease. The Foundation is sustaining support for the study of differentiation and growth, maintenance and renewal, as a contribution to fundamental knowledge about ageing.

#### Committee for the Advancement of Medicine

Together with the Foundation's report we have received a supplement to the *Oxford University Gazette*<sup>2</sup> containing the report of the Nuffield Committee for the Advancement of Medicine. It is devoted to routine reports of the various departments at Oxford, the staff changes, the lectures and research, and the clinical work. One feature of special interest is the record department which was established some years ago for the improvement of clinical records at the Radcliffe Infirmary and other hospitals associated with the scheme. Even before the National Health Service was introduced the Radcliffe Infirmary was one of the largest hospitals in England, as measured by the number of in-patients admitted each year. Complete figures are now more difficult to obtain, but it is claimed that as compared with London hospitals more in-patients are admitted. In 1949 at the Radcliffe Infirmary and its annexe, the Churchill Hospital, just upon 19,000 in-patients were admitted. In one month the total of in-patient notes issued in the Records Department was over 2,000. The financial support to the Records Department has continually increased, at present amounting to approximately £10,000 a year, and the Nuffield Committee's annual subvention is tending to be used solely for research in connexion with clinical records.

## Reports of Societies

### ROYAL MEDICO-PSYCHOLOGICAL ASSOCIATION

The one hundred and tenth meeting of the Royal Medico-Psychological Association was held at Crichton Royal, Dumfries, from July 10 to 13. Some 200 members attended, as well as delegates from U.S.A., Canada, Australia, and the Continent. The visitors were given opportunities of inspecting the work of the hospital, and, in addition to small sectional meetings, three well-attended sessions were held. \*There were also a number of successful social entertainments.

#### Preventive Psychiatry

In his presidential address Dr. P. K. McCOWAN surveyed recent trends in psychiatric practice and research. Dealing with preventive psychiatry, the speaker warned against the enthusiastic application of psycho-analytical concepts to human relations and world affairs. A more modest and local effort in this field had shown that in a rural area the proportion of intellectual subnormality in the school population was as high as 11%. As these subjects were seen to become efficient and contented workers on the land, the need for a practical type of education was obvious. The

survey also had indicated that provision for mental defectives might have to be even greater than was at present envisaged. Education of the public in psychiatric matters seemed a worth-while contribution to preventive medicine, and a successful course of lectures recently held in Dumfries was described. In discussing child psychiatry, Dr. McCOWAN noted that the psycho-analytic approach was not the only one available. He recommended the fuller employment of lay psychotherapists, working under medical supervision. In-patient clinics for maladjusted children were a comparatively recent development in Britain. The first Scottish clinic of this type had been opened at Crichton Royal a few months previously.

#### Theory of Action of Shock Treatment

The president's interest in the biochemistry of the brain was evident in his hypothesis of the action of the so-called shock treatments. In his view, these, by various means, produce anoxia. There was evidence to suggest that they were selective in their site of action. After their application a more normal level of cerebral metabolism was restored temporarily, and with repetition sometimes permanently, with cure of the psychosis. It was not the anoxia itself but the brain's reaction to it which restored normality, whether the autonomic system, the pituitary mechanism, or the hypothalamus be involved. A psychosis might well be an "adaptation disease," and A.C.T.H. and cortisone might augur methods of psychiatric treatment more refined than those in current use.

Finally Dr. McCOWAN reviewed recent progress in the fields of biochemistry, neuropathology, and biophysics, and discussed the present position of academic psychology.

#### Effects of E.C.T. on the Personality

Psychological changes due to E.C.T. were discussed by Mr. R. HETHERINGTON. A comprehensive battery of tests was used to assess intellectual capacity, efficiency, and retentivity. In a small series of depressed patients tests were given during treatment, as well as before and after, and the results indicated that important psychological changes take place during E.C.T. The performance of tasks involving reasoning and retention appeared to be impaired during treatment, while the performance of tasks depending on "personal tempo" (natural pace of working) and muscular skill was improved. There was evidence that it was the process of assimilation rather than retention which was impaired, and remembering as well as reasoning might well suffer from the lack of concentration and increased distractibility so common during treatment. On the other hand, the increase of personal tempo argued the removal of retardation, and so explained the improvement in muscular skill when no reasoning was required. The results suggested that E.C.T. in depression produced simultaneously impairment of clear thinking and an increase in the speed of work. Which of these two effects predominated depended upon the type of work attempted.

#### Electrical Changes in the Brain after E.C.T.

A theory of E.C.T. action based largely on the results of an electroencephalographic investigation was put forward by Dr. M. ROTH. Serial studies had shown that during a course of E.C.T. there was a progressive transformation of the E.E.G. under barbiturate anaesthesia, the changes preceding and outlasting those to be observed in the routine record. The characteristics of these changes and of those elicited by sensory stimulation and their evocation by barbiturate suggested a cumulative influence on a diencephalic midline structure with access to all cortical areas, though with some special relationship to the frontal lobes. This was possibly homologous with the thalamic reticular system studied in animals by Morison and Dempsey and by Jasper. In association with the E.E.G. changes were rapid alterations in sleep rhythm, appetite, etc., suggesting a concerted response from the centres