

breast cancer being found in 21 of these. For the controls, cancer occurred in a total of 80 families, with an incidence of breast cancer in 13.

There is a notable absence of any significant infant mortality rate due to cancer, attributable probably to poor diagnosis in earlier times. Mortality in the early age-groups, particularly in the 0-4 years age-group, is high, but, of 819 deaths of relations for both cancer and control groups, only one death from cancer is reported. This was reflected in a general reduction in the incidence of all cancers in both groups.

The mean age for detection of cancer of the breast in the proband is 47.5 years, and for those families with breast cancer in relatives it is 48.4 years. The mean ages for

patients and control groups at the time of the survey were  $50.1 \pm 13.6$  years (cancer group) and  $50.4 \pm 10.3$  years (control group). This means that the cancer group has, on the average, lived 2.6 years since the diagnosis of their disease.

The number of cases of cancer and the types of cancer occurring in the two groups show a similar distribution, except for breast cancer. The highest rate for breast cancer among relatives occurs in maternal aunts. There is a higher incidence of breast cancers and all cancers in female relations of breast cancer patients. With regard to the effect of degree of relationship, there is a high incidence of breast cancer in persons with a coefficient of relationship of one-quarter in the patient group.

## EPILEPSY IN AFRICANS

A STUDY of epilepsy in Africans in Southern Rhodesia has been undertaken by Dr. L. F. Levy, Dr. J. I. Forbes and Dr. T. S. Parienyatwa of Harare Hospital, Salisbury, Southern Rhodesia (*Central African Journal of Medicine*, 10, No. 7; July, 1964). In a field survey carried out in the Semokwe Reserve, 130 persons admitting to seizures were discovered in a population of approximately 17,500, and these sufferers were interviewed. A parallel group of 100 patients presenting at Harare Hospital with the complaint of seizures was also fully investigated.

The incidence of epilepsy in Africans is probably slightly higher than in Europeans, but African patients tend to present themselves for treatment only when their earning capacity becomes threatened by the disorder. Fits affecting women and children seem to be regarded by patient and parent alike as a misfortune to be accepted, and there must be large numbers of rural sufferers who have never sought medical help. Even allowing for this tolerance of fits, however, the discrepancy between the number of males (161) and females (69) in the combined study seems remarkable and contrasts strongly with the sex distribution reported by other authors.

The age of onset of the disease is similar to that found in other racial groups. Premonitory symptoms vary widely and have no special characteristics. The frequency of attacks in the rural group is interesting because it reflects the pattern of epilepsy which is uncontrolled and allowed to run its natural course. About 10 per cent of the sufferers in the Semokwe Reserve group had fits once a day or more; another 10 per cent had fits several times a month; more than half (56 per cent) had fits once or twice a month, and the remaining 24 per cent had them at intervals of once in two months or longer. A family history of fits was obtained from 65 per cent of the sufferers in the Semokwe Reserve group, but only from 20 per cent of those in the

Harare Hospital group. The question of genetic factors in epilepsy should be re-evaluated in all races.

Accidents resulting from fits are common. Twenty-one per cent of the field group and 19 per cent of the hospital group had sustained burns at some time, and, in many cases, the deformity resulting from these was severe. Apart from the physical trauma, epilepsy has a marked effect on the life of the sufferer. In the Semokwe Reserve group 39 per cent of the children up to the age of 14 years were made the butt of humour, and 44 per cent of patients over the age of 15 years were made to feel outcasts by the rest of the community. Twelve male adults and one female had been dismissed from their jobs on account of their seizures. The effects of epilepsy on marital life seem to have no special peculiarities.

Enquiries into tribal beliefs about the aetiology of epilepsy reveal how widespread is superstition and to what extent belief in witchcraft persists. Fifty-nine per cent of Semokwe Reserve sufferers believed their epilepsy resulted from their being 'bewitched'.

The present treatment of epilepsy in such patients is frequently unsatisfactory. The standard anti-convulsant drugs are as effective in controlling their fits as in other races, but, in the first place, sufferers do not make themselves available for treatment; and, secondly, even if they do, the problem of achieving regular and conscientious administration of the selected drug remains. This was also the finding of Hurst *et al.* in the Meadowlands survey. Education and enlightenment of rural Africans will, no doubt, eventually change their present attitude of resignation. In the meantime, it seems that the only way to reach the sufferers would be to send mobile teams into the reserves to seek them out. Once the diagnosis has been made and curable underlying disease excluded, treatment with a long-acting injectionable anti-convulsant would appear to offer the best hope of adequate control.

## RECENT REVIEWS OF FOSSIL FISHES

TWO publications of special interest have recently been published on fossil fish: Dr. R. H. Denison has reviewed the Cyathaspididae\*, and Dr. C. Patterson† the Mesozoic Acanthopterygia.

Dr. Denison deals with the earliest known family of Agnatha, excluding isolated fragments from earlier strata.

\* Chicago Natural History Museum. *Fieldiana: Geology*. 13, No. 5: *The Cyathaspididae—a Family of Silurian and Devonian Jawless Vertebrates*. By Robert H. Denison. Pp. 309-473. (Chicago: Chicago Natural History Museum, 1964.) 5 dollars.

† *Philosophical Transactions of the Royal Society of London. Series B: Biological Sciences*. No. 739, 247 (July 2, 1964): *A Review of Mesozoic Acanthopterygian Fishes, with special reference to those of the English Chalk*. By C. Patterson. Pp. 212-482 + plates 2-5. (London: Royal Society, 1964.) 105s. 15.75 dollars.

The material ranges from the base of the Middle Silurian (Wenlockian) to late Early Devonian (Dittonian). The author describes the anatomy, external and internal, of all forms, which comprise in his interpretation 63 species grouped into 19 genera. The classification adopted for the Cyathaspididae is essentially that of other recent writers, allowing for shifts in the hierarchical status of the taxa. Dr. Denison follows most scholars, Stensiö excepted, in dissociating the Heterostraci from close affinity with the cyclostomes, osteostraci and anaspids. He divides the class Agnatha into two sub-classes, the more primitive Diplorhina with Heterostraci and probably Coelolepida, and the more specialized Monorhina with Myxinoidea and