

Sinclair and Hinshaw (1951) reported that ischaemic tingling was diminished or absent in patients with spinal or cerebral lesions causing defective tactile sensibility, and suggested that "It may even be that a diminution in the sensation of tingling affords a more sensitive test for such defects than standard testing methods". However, the present work suggests that the relation between tingling and tactile loss is not a simple one. In the group of spinal cord lesions, ischaemic tingling was short-lived or absent in all the patients with a raised tactile threshold and a reduced "time to numbness" (Cases 2, 3, and 4), and in Case 5 ischaemic tingling returned as sensation improved after operation. In those with cerebral lesions, however, ischaemic tingling was absent in only one case (Case 6), and reduced or delayed in two (Cases 8 and 9). In Cases 7 and 11 ischaemic tingling was present although there was considerable sensory loss and a reduced "time to numbness" in each case.

Marshall (1952) found that in patients with sciatica due to lumbar disc degeneration, ischaemic tingling sometimes occurred earlier in the affected foot than in the normal one. Marshall explained his results by suggesting that there were degenerative changes in the distal segments of the affected nerve fibres which rendered them more irritable during ischaemia. His results could, however, be explained by the simple additive effect of two separate irritative foci along the course of the nerve, one at the level of the lesion and the other under the pneumatic cuff.

If, in patients with spinal and cerebral lesions, irritable foci at different levels can exert an additive

effect, the intensity of ischaemic paraesthesiae would presumably depend upon the response of ischaemic nerve peripherally and upon the amount of irritation and spontaneous discharge occurring in the central lesion. The latter would not necessarily be related to the severity of the lesion in terms of other sensory defects.

SUMMARY

In 11 patients with sensory loss in the hand due to spinal or cerebral lesions, the circulation to the affected arm has been arrested by a pneumatic tourniquet.

When a partial peripheral nerve block has been produced in this way, its effect on sensation has been added to that of the central lesion and has resulted in sensory loss in excess of that produced by either one alone.

In patients with spinal cord lesions, repeated tourniquet tests provide a sensitive method of recording improvement or deterioration in the condition of the patient. In those with cerebral lesions there are, however, objections to this form of test.

I am indebted to members of the staff of the National Hospital for permission to publish details of cases under their care. I also wish to thank Dr. E. A. Carmichael for helpful criticism and advice.

REFERENCES

- Gilliat, R. W., and Wilson, T. G. (1954). *Journal of Neurology, Neurosurgery and Psychiatry*, 17, 104.
 Marshall, J. (1952). *Ibid.*, 15, 242.
 McAlpine, D. (1954). *Arch. Midx. Hosp.*, 4, 1.
 Sinclair, D. C., and Hinshaw, J. R. (1951). *Quart. J. exp. Psychol.*, 3, 49.
 Weddell, G., and Sinclair, D. C. (1947). *Journal of Neurology, Neurosurgery and Psychiatry*, 10, 26.

THE FEBRUARY (1955) ISSUE

The February (1955) issue contains the following papers :—

- Variations in the Basophilia of Nerve Cells Associated with Increased Cell Activity and Functional Stress.** Lárus Einarson and Erik Krogh.
- Argyrophile Bodies in the Human Spinal Cord.** Marion C. Smith.
- Morphological Nervous Changes in Survivors of Severe Jaundice of the Newborn.** L. Crome.
- Unusually Severe Lesions in the Brain Following Status Epilepticus.** A Meyer, E. Beck, and M. Shepherd.
- Prefrontal Leucotomy and the Anticipation of Pain.** Alick Elithorn, Malcolm F. Piercy, and Margaret A. Crosskey.
- Intellectual Changes Following Temporal Lobectomy for Psychomotor Epilepsy.** Victor Meyer and Aubrey J. Yates.
- Visual Hallucinations of the Self in Organic Disease.** Kenneth Dewhurst and John Pearson.
- Basilar Impression.** D. G. Phillips.
- Some Observations on the Electroencephalogram in Cerebral Tumours.** J. H. D. Millar.
- Alzheimer's Disease with Acne Rosacea in One of Identical Twins.** Esther A. Davidson and E. Elizabeth Robertson.

A number of copies are still available and may be obtained from the Publishing Manager, British Medical Association, Tavistock Square, W.C.1, price 12s. 6d.

BOOK REVIEWS

Sigmund Freud: On Aphasia (Translation by E. Stengel). (Pp. 105. 12s. 6d.) London: Imago Publishing Co. 1953.

This book was published in Vienna in 1891. This is its first English translation, and Dr. Stengel is to be congratulated on its clarity and lack of those verbal asperities which so often mar translations of technical monographs. The book is of historical interest as an early work of the originator of psychoanalysis. It already shows many aspects of the style that became familiar in Freud's later psychoanalytic works—pleasing use of language, the support of argument by analogy, and consideration of all the logical implications of any particular thesis. It was written at a time when the immense possibilities of localization of cerebral function were just being appreciated, but the author makes it clear, by logical argument from clinical facts, that an entirely anatomical approach to aphasia is not enough. While giving due weight to factors of localization, he pleads for a consideration of functional aspects also. This approach gives the book a more than historical value: indeed it reads—apart from occasional phrases which date it—almost as if it were written a generation after rather than before Head's *magnum opus*, and it is surprising and interesting to learn that Head apparently never read it.

As a review of the problems which are still integral to the study of aphasia it will reward the attention of neurologists, who will be glad to see that Hughlings Jackson's genius was clearly appreciated by Freud.

Multiple Sclerosis. By Douglas McAlpine, Nigel D. Compston, and Charles E. Lumsden. (Pp. viii + 304; 32 plates. 35s.) Edinburgh: E. & S. Livingstone. 1955.

This is an important addition to neurological literature. A large part of the book consists of a careful clinical study of over 1,000 cases of multiple sclerosis seen at the Middlesex Hospital Neurological Department during a period of 22 years. This contains much useful information for the clinician and, for example, includes an interesting study of the spread of plaques in the cervical cord, and of the results of careful questioning with regard to possible aetiological factors which seem to cause relapses in the disease. Familial cases are carefully reported. Prognosis as to disablement and life contain useful figures but the sections on treatment are unfortunately still vague and uncertain.

The chapters on pathology and the problems of aetiology are quite outstanding, and are based on Dr. Lumsden's important research work in this field. There are no specific nerve cell changes, and many of these are highly resistant to the effects of being in a plaque.

The peculiarity of the break-up of the myelin sheath lies in its being confined to the area of plaque and seems to depend on a process of erosion or lysis from the outside of the plaque. It is not known whether a myelin sheath can be restored when the axon remains intact. Myelin sheaths are normally sheathed by the processes of oligodendrocytes, but these latter cells disappear early in the development of the plaque and are nowhere to be seen within the outer edge of the area of demyelination. The lesion may possibly always start in relation to a small blood vessel, but such relationship disappears as the plaque increases in size. Plaques are hardly ever completely quiescent for there is evidence of continued activity at the periphery of even the most sclerotic lesion.

With regard to the "allergic" encephalopathies, the disease differs from multiple sclerosis from start to finish. Recent work has shown that there is a steady turnover of myelin lipids and these are synthesized locally in the brain. In the process of demyelination, therefore, the local synthesis may be blocked, or the normal breakdown may be abnormally rapid. Finally, as a fitting climax to these stimulating pages, comes the hypothesis that the features of the plaque could all be explained by a process which has a selective effect on the oligodendrocyte.

IVth Symposium Neuroradiologicum

The meeting will be held in London from September 13 to 17. Registration will take place on September 12 at the University of London, Malet Street, W.C.1, where the scientific meetings will be held. Radiologists, neurologists, and neurosurgeons are particularly welcome.

Subjects for discussion include (1) cerebrovascular disease, (2) the localization of intracranial tumours by means of isotopes, (3) applications of stereotaxometry, (4) new techniques, and (5) various proffered papers on a variety of neuroradiological subjects.

Scientific and technical exhibitions are being held.

It is hoped to arrange a joint half-day session with the 2nd International Congress of Neuropathology which is being held simultaneously in London.

A full social programme has been planned including visits to places of interest for wives and families of members.

Those who cannot spare the whole time of the meeting are invited to become day members at a much reduced subscription rate.

Application forms and further information may be obtained from Dr. R. D. Hoare, Secretary, Symposium Neuroradiologicum, the National Hospital for Nervous Diseases, Queen Square, London, W.C.1.

BOOKS RECEIVED

(Review in a later issue is not precluded by notice here of books recently received.)

- Die Wirbelsäulenverletzungen und ihre Ausheilung.** By Alfons Lob. (Pp. xii + 272; 149 illustrations, 16 tables. DM. 78.-) Stuttgart: Georg Thieme Verlag. 1954.
- The Cerebrospinal Fluid.** By S. Lups and A. M. F. H. Haan; Introduction by Pearce Bailey. (Pp. xv + 350; 93 illustrations. 52s. 6d.) London: Cleaver-Hume Press. 1954.
- Brain Mechanisms and Consciousness.** A Symposium organized by The Council for International Organizations of Medical Sciences established under the joint auspices of U.N.E.S.C.O. and W.H.O. Edited by J. F. Delafresnaye. (Pp. xv + 556; illustrated. 42s. 0d.) Oxford: Blackwell Scientific Publications. 1954.
- Développement Psycho-Moteur du Premier Age.** By Cyrille Koupernik; illustrated by D. Harlé. (Pp. 197; 58 illustrations. Fr.frs. 500.-) Paris: Presses Universitaires de France. 1954.
- The Human Brain in Sagittal Section.** By Marcus Singer and Paul I. Yakovlev. (Pp. v + 81; 46 illustrations. 45s. 0d.) Oxford: Blackwell Scientific Publications; Springfield (Illinois): Charles C. Thomas.
- Modern Trends in Psychosomatic Medicine.** By Desmond O'Neill. (Pp. xi + 375; 29 illustrations. 55s. 0d.) London: Butterworth. 1955.
- Diencephalon.** By Walter Rudolf Hess. (Pp. xii + 79; 33 illustrations. 25s. 0d.) London: William Heinemann. 1955.
- Diseases of the Nervous System.** 8th edition. By F. M. R. Walshe. (Pp. xvi + 357; 58 illustrations. 24s. 0d.) Edinburgh: E. & S. Livingstone. 1955.
- Psychosurgery and the Self.** By Mary F. Robinson and Walter Freeman. (Pp. ix + 118. \$3.00.) New York: Grune & Stratton. 1954.
- The Pyramidal Tract.** By A. M. Lassek. (Pp. v + 167. 34s. 0d.) Oxford: Blackwell Scientific Publications; Springfield (Illinois): Charles C. Thomas. 1954.
- Essentials of Abnormal Child Psychology.** By Ernest Harms. (Pp. xiv + 265; 45 illustrations. \$5.00.) New York: Julian Press Inc. 1954.
- The Visual Fields.** By Brodie Hughes. (Pp. ix + 174; 158 illustrations. 35s. 0d.) Oxford: Blackwell Scientific Publications. 1954.
- Child Psychology,** 4th ed. By Arthur T. Jersild. (Pp. xii + 676. 42s. 0d.) London: Staples Press Ltd. 1955.
- Physiologie du Système Nerveux Central,** 2nd ed. By Georges Morin. (Pp. 354; 95 illustrations. Fr.frs. 2,300.-) Paris: Masson & Cie. 1955.
- Psychomotor Aspects of Mental Disease.** By N. E. King. (Pp. xiv + 185. 28s. 0d.; \$3.50.) London: Oxford University Press; Cambridge (Mass.): Harvard University Press. 1955.
- Neurocirugia,** Vol. X. Published by Dr. Alfonso Asenjo, Santiago (Chile). 1954.
- Neurology,** 2nd ed. By S. A. Kinnier Wilson, edited by A. Ninian Bruce, in three volumes. (Pp. xxix + 2060 + Index; 279 illustrations. £10 10s. 0d. per set; £3 10s. 0d. per volume.) London: Butterworth. 1954.
- Hyperostosis Cranii.** By Sherwood Moore. (Pp. xxii + 226; 107 illustrations. 75s. 0d.) Oxford: Blackwell Scientific Publications; Springfield (Illinois): Charles C. Thomas. 1955.
- Correlative Neurosurgery.** By Edgar A. Kahn, Robert C. Bassett, Richard C. Schneider, and Elizabeth Caroline Crosby. (Pp. xv + 413; 235 illustrations. £7 0s. 0d.) Oxford: Blackwell Scientific Publications; Springfield (Illinois): Charles C. Thomas. 1955.
- Die Chirurgie der peripheren Nerven.** By H. Nigst; Introduction by R. Nissen. (Pp. viii + 196; 104 illustrations. DM. 29.70.) Stuttgart: Georg Thieme Verlag. 1955.
- A Textbook of Neurology.** By H. Houston Merritt. (Pp. 746; 181 illustrations, 128 tables. 90s. 0d.) London: Henry Kimpton. 1955.
- The Psychological Variables in Human Cancer.** A Symposium presented at the Veterans Administration Hospital, Long Beach, California, on October 23, 1953. Edited by Joseph A. Gangerelli and Frank J. Kirkner. (Pp. 135; 10 illustrations. 22s. 6d.) London: Cambridge University Press. 1955.
- Die Cervikalen Vertebral-Syndrome.** Edited by F. Reischauer. (Pp. 71; illustrated. DM. 7.80.) Stuttgart: Georg Thieme Verlag. 1955.
- The Management of Acute Poliomyelitis.** By C. P. Stott and M. Fischer-Williams; Foreword by W. Ritchie Russell. (Pp. xii + 99; 43 illustrations. 12s. 6d.) Edinburgh and London: E. & S. Livingstone. 1955.

Research Fellowships in the Field of Multiple Sclerosis and Allied Diseases

The National Multiple Sclerosis Society has established a limited number of fellowships to encourage promising students and scholars to enter the field of research related to multiple sclerosis and the demyelinating diseases.

Fellowship candidates are free to elect a training institution and sponsor of their own choice.

Applications may be secured by writing to: Harold R. Wainerdi, M.D., Medical Director, National Multiple Sclerosis Society, 270 Park Avenue, New York 17, N.Y.