Book reviews

Skeletal Muscle Pathology. Edited by Frank L Mastaglia and Sir John Walton. (Pp 648; £45.00.) Edinburgh: Churchill Livingstone, 1982.

Intended as a supplement to Walton's *Disorders of Muscle*, the present multi-author volume is directed towards "the general pathologist who, from time to time, may need to refer to such a volume to help him in interpreting the changes in samples of muscle which may come to him". The book is, in effect, a coverage of muscle morphology. Many of the contributors are clinicians, which emphasises the need to know the clinical status of the patient in order to look usefully at muscle morphology. Furthermore, the book shows us quite clearly that the adequate study of muscle disease (including muscle biopsies) requires the use of a range of techniques including fresh frozen histochemical preparations, paraffin histology and electron microscopy, to mention only some of the morphological methods. The complexity and cost of such a comprehensive study of muscle biopsy puts it outside the capacity of most general pathology laboratories. While some chapters of this new book would clearly be very helpful to the general pathologist, in particular one entitled *Pathological reactions* (Cullen and Mastaglia) and all are interesting, much of the book is directed to the specialist reader. Some comprehensive review chapters are included—normal morphology (Landon); congenital myopathies (Fardeau); mitochondrial myopathies (Morgan-Hughes); the pathology of the muscle spindle (Swash); inflammatory disorders (Mastaglia and Walton). Other chapters deal with aspects of muscle disease in a clinical context—endocrine disorders (Hudgson and Hall); periodic paralysis and electrolyte disorders (Tomé); toxic and drug-induced myopathy (Kakulas); malignant hyperthermia (Harriman); myotonia (Åström and Adams). The pathology of the neuromuscular junction (Chou) is dealt with almost entirely from the electron microscopic point of view, while the pathology of intramuscular nerves (Coërs) is based entirely on methylene blue preparations as in previous publications by that author. Schmalbruch has contributed an idiosyncratic chapter on the dystrophies, and amongst others are contributions on immunological pathology (Dawkins *et al*); tumours (van Unnik) and storage diseases (Pleasure and Bonilla) which emphasises

some aspects of the biochemical pathology of muscle. The quality of the illustrations, so important for a pathology text, is unfortunately very variable. Although I doubt whether this book will do much to facilitate biopsy diagnosis, and it is not a laboratory bench-book, muscle pathology is very comprehensively covered.

LW DUCHEN

Clinics in Immunology and Allergy, Vol 2, No 2 "Immunoneuropathology". Edited by Byron H Waksman. (Pp 485; £11.75.) London: WB Saunders Co, 1982.

This book contains 12 chapters on immunologically mediated diseases of the nervous system. Some contributions cover aspects of as yet uncertain importance, others are more general reviews of diseases where immunological mechanisms are already well-established. In each case, following a brief introduction, the authors devote considerable space to recent work, including their own unpublished results and allow themselves to speculate in a stimulating way on the underlying principles or applications of the work they describe. The volume does not, therefore, present a general synthesis of established concepts and proven facts; instead, it is a provocative and invaluable source of information, with an extensive bibliography down to 1982, covering the rapidly evolving and changing field of immunology and the nervous system.

The particular problem of writing on topics where essential information is lacking or existing results inconsistent, is evident in the chapters on *The Interferon—Natural Killer Cell System in Multiple Sclerosis* (PA Neighbour and BR Bloom), *Circulating Myelinotoxic and Neuroelectric Blocking Factors in Demyelinative Disorders* (MB Bornstein and I Grundke-Iqbal) and *Myelin Components in the Cerebrospinal Fluid in Diseases Affecting Central Nervous System Myelin* (JN Whitaker and DS Snyder), but these are nevertheless useful contributions. One chapter deals with the *Peripheral Nervous System* (G Zito, SD Cook and PC Dowling), describing the immunology of acute and chronic acquired inflammatory demyelinating neuropathies and those associated with dysimmunoglobulinaemia. JM Newsom-Davis writes on *Diseases of Neuro-Muscular Transmission* with particular emphasis on the role of the thymus in the process that leads to synthesis of acetylcholine receptor antibody in myasthenia gravis and recent evidence for

immunological mechanisms in the Lambert-Eaton syndrome. These are both excellent chapters.

PW Lampert describes the earliest pathological changes in immune complex disease, acute and chronic EAE, persistent viral infections and the important animal models of virally provoked auto-immune demyelination, which emphasise by analogy that demyelinating disease in man, particularly multiple sclerosis, could be initiated by a virus and immunologically mediated.

V ter Meulen, HW Kreth and MJ Carter describe general properties of viruses in the CNS and the Immunological Mechanisms involved in allowing persistent viral infection together with a description of five such diseases in man and animals. The problem of whether an abnormality of cell-mediated immunity exists in patients with multiple sclerosis which permits persistent viral infection or could even identify an aetiological agent is described by JI Greenstein and HF McFarland with particular emphasis on patterns of immune response to measles virus whereas KP Johnson, B Vandvik and E Norrby review the evidence from *Humoral Immunity for a Viral cause of multiple sclerosis* and describe the growing belief that IgG synthesis in the CNS may be a "nonsense" phenomenon indicating that the disease does not have a single cause but is a disease of non-specific defective immune regulation to a large number of aetiological agents. The question of what this defect in immune regulation might be is discussed by BGW Arnason and by HL Weiner and SL Hauser in two chapters on defects of suppressor cell function and changes in lymphocyte sub-populations in the peripheral blood, brain and cerebrospinal fluid in different categories of patient with multiple sclerosis, together with the implications for pathogenesis and management which these new observations suggest.

J Mertin encourages the feinthearted that specific defects in immune regulation may soon be identified and lead to forms of treatment bringing greater success than is evident from his encyclopaedic review of existing trials of immunological treatment in multiple sclerosis.

Individual readers may criticise the selection of chapters in this review of immunoneuropathology but the book represents an important addition to the literature of immunology and the nervous system.

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