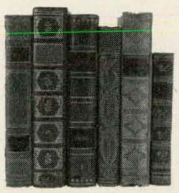

Frontiers in Multiple Sclerosis: Clinical Research and Therapy

Edited by Oded Abramsky and Haim Ovadia. Pp 318, with illus. Mosby Yearbook, Inc, 11830 Westline Industrial Dr, St Louis, MO 63146, 1997, $99.

Multiple sclerosis (MS) is the most common central nervous system demyelinating disease affecting young adults. Most MS patients suffer from a relapsing-remitting (RR) course that may lead to severe neurologic disability.

The exact cause of MS is not known (although autoimmune factors influenced by environmental conditions are suspected), and there is no cure to date. But some astounding strides have been made in understanding this disease, and various modes of therapy may be soon available—if not so already—that help to minimize the disease process.

Current research developments and potential future treatment modalities are the mainstay of *Frontiers in Multiple Sclerosis*. This book is actually a compilation of studies presented at the 11th European Congress of the European Committee for Treatment and Research in Multiple Sclerosis, which was held in September 1995.

Divided into six parts, the book begins by reviewing current classification criteria for MS, pointing out how inadequate most of these criteria are when applied to pure research standards. The authors suggest a new approach to staging MS that is based not only on clinical evaluation but also magnetic resonance imaging (MRI) and treatment responses to medications.

The first part concludes with several chapters on the epidemiology of MS (including how difficult it actually is to conduct research in this area) and the genetic basis of MS.

Basic immunology and the immunologic factors involved in MS are covered in Part 2. These chapters deal mostly with animal studies and are not written for the average clinician but rather for the pure researcher.

Part 3 reviews the mechanisms of demyelination and remyelination. The MRI chapter relates MRI's importance in helping to identify patients with MS as well as its potential to predict disease course, categorize disease types, and supplement—if not soon supplant—clinical measures as trial outcome measures. The multifaceted applications of MRI indicate how far the technology has advanced our knowledge of MS. In addition, the new technique of chemically selective proton magnetic resonance spectroscopy (MRS), which enables an assessment of major energy metabolites, may soon give us a visual representation of the dynamic nature of the metabolic abnormalities underlying MS. Unfortunately, interpretation of MRS has been difficult to standardize, making the clinical application of this technique limited.

Part 4 deals with various pro-inflammatory cytokines, nerve- growth factors, leukocyte adhesion molecules, and heat shock proteins and their relationship to the immunogenetic associations of MS. Again, this part serves the researcher more than the hands-on clinician.

I found Part 5 to be the most practical section of the whole book because it covers various clinical studies of present and potential modes of therapy Included are studies of clinically available medications (interferon beta-1b [Betaseron] and interferon beta-1a [Avonex]) that have been shown to be effective in decreasing the relapse rates of patients with the RR form of MS.

Promising new medical treatment modalities are discussed, including co- polymer 1, which is composed of four L-amino acids and induces immune tolerance to the autoantigen presumed to play a pathologic role in MS. Copolymer 1 (Copaxone) has a good chance of being approved by the Food and Drug Administration this year. It has been used primarily in the treatment of the RR form of MS, as have the interferon agents. One issue of particular interest is whether interferon-β and copolymer 1 could be taken together, as these drugs act by different immunologic mechanisms. Therefore, combined treatment may result in enhanced clinical benefits.

Other drug studies discussed here include linomide, intravenous immunoglobulin, and plasmapheresis combined with interferon and cladribine. All these clinical trials are in various phases of investigation. And although these treatments have a way to go before they reach routine clinical application, the vast number of agents in clinical trials serves as a testament to progress in this area.

The last part of this book looks at the future of MS treatment by examining how today's investigations will help us to understand disease mechanisms and provide comprehensive management.

Like the work it highlights, *Frontiers in Multiple Sclerosis* is, for the most part, a text on the leading edge of potential promise. Definitely not clinically oriented, this book will serve well the researcher or anyone with a keen interest in MS. The hands-on clinician, however, will have some difficulty trudging through many of the chapters to glean tidbits of clinical acumen.♦

Leonid Skorin, Jr, DO
Dixon, Ill