

Non-A, Non-B Hepatitis

Edited by

R.J. Gerety

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R. J. GERETY

Hepatitis Branch
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Bureau of Biologics
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Contributors

Richard D. Aach	James E. Maynard
Harvey J. Alter	Toshitsugu Oda
Daniel W. Bradley	George Papaevangelou
Friedrich Deinhardt	Hans Popper
Jules L. Dienstag	Jorge Rakela
Geoffrey M. Dusheiko	Allan G. Redeker
M. Elaine Eyster	Leonard B. Seeff
Robert J. Gerety	Cladd E. Stevens
Paul V. Holland	Hiroshi Suzuki
F. Blaine Hollinger	Wolf Szmunn
Jay H. Hoofnagle	Edward Tabor
E. Anthony Jones	Victor M. Villarejos
Arie J. Zuckerman	

List of Contributors

Numbers in parentheses indicate the pages on which the authors' contributions begin.

- Richard D. Aach (49), Sinai Hospital of Baltimore, and Department of Medicine, Johns Hopkins University School of Medicine, Baltimore, Maryland 21215
- Harvey J. Alter (49), Clinical Center Blood Bank, National Institutes of Health, Bethesda, Maryland 20205
- Daniel W. Bradley (71), Hepatitis Laboratories Division, Center for Infectious Diseases, Center for Disease Control, Phoenix, Arizona 85014
- Friedrich Deinhardt (1), Max v. Pettenkofer-Institut, Ludwig-Maximilians-University, Munich, West Germany
- Jules L. Dienstag (119, 229), Gastrointestinal Unit, Massachusetts General Hospital, Boston, Massachusetts 02114
- Geoffrey M. Dusheiko (251), Liver Diseases Section, National Institute of Arthritis, Metabolism and Digestive Diseases, National Institutes of Health, Bethesda, Maryland 20205
- M. Elaine Eyster (97), Hematology Division, Department of Medicine, Milton S. Hershey Medical Center, Hershey, Pennsylvania 17033
- Robert J. Gerety (97, 207, 289), Hepatitis Branch, Division of Blood and Blood Products, Bureau of Biologics, Food and Drug Administration, Bethesda, Maryland 20205
- Paul V. Holland (49), Clinical Center Blood Bank, National Institutes of Health, Bethesda, Maryland 20205
- F. Blaine Hollinger (49), Department of Virology and Epidemiology, Baylor University School of Medicine, Houston, Texas 77030
- Jay H. Hoofnagle (23), Liver Diseases Section, National Institute of Arthritis, Metabolism and Digestive Diseases, National Institutes of Health, Bethesda, Maryland 20205

- E. Anthony Jones (251), Liver Diseases Section, National Institute of Arthritis, Metabolism and Digestive Diseases, National Institutes of Health, Bethesda, Maryland 20205
- James E. Maynard (71), Hepatitis Laboratories Division, Center for Infectious Diseases, Center for Disease Control, Phoenix, Arizona 85014
- Toshitsugu Oda (153), Faculty of Medicine, First Department of Internal Medicine, University of Tokyo, Tokyo, Japan
- George Papaevangelou (167), Department of Epidemiology and Medical Statistics, Athens School of Hygiene, Athens, Greece
- Hans Popper (229), Stratton Laboratory for the Study of Liver Diseases, Mount Sinai School of Medicine of the City University of New York, New York, New York 10029
- Jorge Rakela (39), Liver Service, Department of Medicine, University of Southern California School of Medicine, Rancho Los Amigos County Hospital, Downey, California 90242
- Allan G. Redeker (39), Liver Service, Department of Medicine, University of Southern California School of Medicine, Rancho Los Amigos County Hospital, Downey, California 90242
- Leonard B. Seeff (271), Gastroenterology Hepatology Center, Veterans Administration Medical Center, Washington, D.C. 20422
- Cladd E. Stevens (119), Laboratory of Epidemiology, The Lindsley Kimball Research Institute, New York Blood Center, New York, New York 10021
- Hiroshi Suzuki (153), Department of Medicine, Yamanashi Medical University, Yamanashi, Japan
- Wolf Szmunes (119), Laboratory of Epidemiology, The Lindsley Kimball Research Institute, New York Blood Center, New York, New York 10021
- Edward Tabor (189, 241), Hepatitis Branch, Division of Blood and Blood Products, Bureau of Biologics, Food and Drug Administration, Bethesda, Maryland 20205
- Victor M. Villarejos (175), Louisiana State University-International Center for Medical Research and Training, Apartado 10155, San Jose, Costa Rica
- Arie J. Zuckerman (139), Department of Microbiology, London School of Hygiene and Tropical Medicine, London WC1E 7HT, England

¹Present address: Sinai Hospital of Baltimore, Baltimore, Maryland 21215.

Preface

It was apparent when this endeavor was first contemplated that there was a true need for such a book since none existed. A surprisingly large amount of information had become available, but no one person no matter how active in the field or how knowledgeable could write such a book alone. I was truly gratified when so many friends, all highly qualified physicians and researchers and each an expert in his area of viral hepatitis, quickly agreed to contribute chapters.

The book that resulted is a complete, in-depth, up-to-the minute, detailed review of the clinical and research aspects of non-A, non-B viral hepatitis, currently the most important form of viral hepatitis in the developed world. The scope of the book covers the identification of this disease and the causative agents, its diagnosis, clinical expression, disease characteristics, epidemiologic characteristics, and world-wide prevalence. Also included are the development of the chimpanzee animal model, its use, and a review of tests employed to diagnose this disease and to detect chronic infections. Finally, the clinical management and prospects for prevention of this disease are reviewed. Of necessity, both hepatitis A and hepatitis B are discussed to compare and contrast these types of viral hepatitis with non-A, non-B hepatitis. I believe this has been done in a manner so as to add to the value of this book rather than to detract from it. The book will adequately inform physicians regarding all aspects of this disease and its agents and will be especially valuable to those working in gastroenterology, hematology, internal medicine, infectious diseases and pediatrics. In addition it will educate blood bankers, researchers, and health care administrators.

I wish to thank my secretary and editorial assistant Mrs. Catherine Hobbs for her outstanding work on this book and the authors, my friends, for the excellence of their contributions.

Robert J. Gerety

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I. INTRODUCTION

Non-A, non-B hepatitis: the name itself describes the situation today. We are able to differentiate this disease or group of diseases from the similar diseases of hepatitis A and hepatitis B, but we are still unable to define non-A, non-B hepatitis in its own terms. The journey leading to the present can be traced far back: it began with the recognition that inflammation of the liver was an infectious disease, continued with the gradual growth of understanding that hepatitis can be caused by specific agents rather than being a symptom sometimes accompanying other disease processes, moved forward rapidly with the recognition of specific antigens of the viruses causing hepatitis A (HAV) and hepatitis B (HBV) and their antibodies, and it ends in the present, with a disease in the process of definition. The later chapters of this book summarize our current

knowledge: a compendium of experimental, clinical, and epidemiological observations, and just as the past contains the clues to the present, in those chapters are the clues to the direction the path will take in the future. This chapter provides the background to our present understanding and examines retrospectively some of the important phases in the development of our recognition of non-A, non-B hepatitis.

II. RECOGNITION OF HEPATITIS AS A VIRAL DISEASE

A. Early Concepts of Hepatitis

Descriptions of hepatitis-like disease can be traced back to antiquity. Later, Pope Zacharias in the eighth century (Zacharias, 751) suggested that at least some forms of jaundice (*morbus regius*) might be infectious (see also Migne, 1850). However, a variety of different diseases was included in the categories of jaundice, icterus or hepatitis, and although early reports interest scholars of medical history, they have played little role in the development of our current ideas and knowledge of the forms of viral hepatitis (Deinhardt, 1976; Zuckerman, 1975). Until the nineteenth century, many infections and toxic conditions could not be distinguished from one another, and a variety of bacterial and parasitic organisms was believed to be the cause of what we think of today as classical hepatitis. Malaria, yellow fever, other hemorrhagic fevers, bacterial infections, and leptospirosis (Weil's disease), besides viral hepatitis as we understand it today, probably caused the single cases, small outbreaks, or larger epidemics, which were described with increasing frequency during the nineteenth century. Through these observations, the idea of the infectious nature of hepatitis gained acceptance, although according to Cockayne (1912) "the first undoubted reference to catarrhal jaundice in epidemic form" was made much earlier, and "is that of Cleghorn, who writes of its prevalence in Minorca in 1745." Epidemics were also noted along the Liguarian coast as early as 1793, at Ludenscheid in 1794, and at Greifswald in 1807-1808. Some writers used the term *infectious jaundice* for Weil's disease, later shown to be caused by *Leptospira icterohemorrhagica*, and distinguished it from "epidemic catarrhal jaundice." Today, it is of some historical interest that "infectious jaundice," or Weil's disease, was thought to be transmitted either by ingestion of contaminated water or food or perhaps by biting insects, whereas spread of "epidemic catarrhal jaundice" was believed to be airborne (Cockayne, 1912). Catarrhal jaundice was thought initially to be caused by the occlusion of bile ducts by mucous plugs, but later it was recognized that catarrhal jaundice was an infection of the liver itself, which caused destruction of parenchymal liver cells. This suggestion was first made in 1834 by Stokes, supported further by the studies of Heitler in 1887 and