

Preface

With the publication of this book, it is our intention that practically all of the major aspects of an unprecedented food poisoning epidemic caused by man-made miracle compounds, polychlorinated biphenyls and their related compounds, can be fully elucidated and better understood by scientists, administrators, industrialists and the general public throughout the world who are deeply concerned about environmental problems. We also hope that the readers will, for their own purposes, make the most of what we have learned from this unfortunate incident which was, in a sense, brought about by the advances of modern science.

In 1968, two years after Jensen's notable discovery that both the environment as well as humans are polluted with polychlorinated biphenyls, which had come into general use in the 1930s, an epidemic of a strange new disease occurred in Western Japan. The disease was quickly clarified by a research team at Kyushu University to be a type of food poisoning caused by the ingestion of a commercial brand of rice oil that had been heavily contaminated with these above mentioned compounds. This new disease, named "Yusho" (oil disease), was soon found to be far more difficult to manage by conventional medical treatments than first thought, primarily due to the very high persistency of these compounds remaining in the tissue of patients. With the growing evidence that the environment is so extensively contaminated with these chlorinated hydrocarbons as to threaten the global ecosystem, Yusho has now become a matter of world-wide concern. The study of Yusho is, therefore, significant not only for those affected with the disease but also for all of us who are known to be potentially polluted with these synthetic compounds.

Our first studies tried to clarify the cause of this strange new disease using a multidisciplinary cooperative approach which proved to be quite successful. This approach is described in detail together with its outcome since it is also considered to be applicable to other health problems as well. In order to achieve our ultimate aim of eventually curing the affected patients, extensive studies have been systematically designed and developed to specify the causal agents, to understand their biochemical, pharmacological or pathological effects, and to provide patients with optimum care and treatment, while, at the same time clarifying both the clinical

and therapeutic features of this disease. This book both summarizes and explains the results of the various related studies undertaken by our study group over the past 27 years. Care was taken to fully explain the background of each study as far as possible, so that the readers could better understand how the study of this disease evolved over time. The results of numerous studies relevant to Yusho conducted by other researchers are also included in this book.

In order to meet the patients' most urgent desire to have these toxic hydrocarbons, particularly carcinogenic polychlorinated dibenzofurans still remaining in their bodies either detoxicated or removed as quickly as possible, we focused our efforts on the development of various radical therapies by conducting numerous animal and clinical experiments. Although most of these efforts have not readily proven to be satisfactory for many years, we are now very proud of a series of extremely laborious clinical trials conducted rather recently, in which dietary fiber from rice bran and cholestyramine were orally administered to patient volunteers in both Japan and Taiwan and their efficacy on the acceleration of the fecal excretion of persisting hydrocarbons was clearly demonstrated. The results of this study are described in detail because they are considered to be original and informative in many aspects. Any comments or suggestions by the readers on this important issue are highly welcome. Since the prognosis of the patients affected by this unique disease, heretofore unknown to man, is so anxiously awaited, it has also been described in detail. In addition, reference is also made to matters which are pertinent to the incidence of Yusho but have not yet been reported in scientific publications, such as the administrative actions taken by the government regarding this epidemic and the suits filed by the victims.

Therefore, this book is intended to cover all aspects of the Yusho epidemic, be they scientific or nonscientific. It may be said to be the product of a cooperative effort made not only by us but also by many others including those who have been devoted to better welfare of the victims for years. Without a doubt, this work could not have been completed without the help and collaboration of the patients themselves. We would therefore like to extend our sincere gratitude to all of them, and hope that this publication will be able to effectively fulfil the purpose for which it was designed.

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