

Edmond I Eger II, Lawrence J. Saidman, Rod N. Westhorpe: the wondrous story of anesthesia

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A book waited for by all anesthesiologists, “The wondrous story of anesthesia”, has been published, in which 3 editors have made efforts to clarify and describe the evolution of anesthesia and related fields. This book consists of 67 chapters and 944 pages (including the index) with 82 contributors. To begin with, it describes an overview of the stories “in three succeeding eras: events during the time preceding and after the demonstration of anesthesia; those in the subsequent 90 years of slow evolution; and those from the 1950s to the present, a period of explosive growth.” Then, it describes specific aspects of the evolution of anesthesia; histories and stories in each country, predicting the future by Editor-in-Chiefs of international anesthesia journals, histories and stories of subspecialties of anesthesia and related fields; methods, drugs, science, monitoring, organizations, education, and more. Readers can understand how anesthesia evolved, what questions and problems existed, how these questions and problems were solved with effort or incidental luck, and the standpoints of present anesthesia and related fields. This is a book to be read by doctors and nurses working in anesthesia-related fields, and is one they are looking forward to.

This book lets readers look back on their own experiences and stories of anesthesia. I have 40 years experience in anesthesia, since 1973, and anesthesia has had an explosive growth during this period. The main volatile anesthetic was halothane at the time I started. Use of ether was limited only to cases having problems with

dysrhythmias. Then, neurolept-anesthesia was popular, but we had problems controlling hypertension. Since then, new volatile anesthetics have been developed: enflurane, isoflurane, sevoflurane and desflurane. In particular, sevoflurane is now the most popular volatile anesthetic, and Japan was the first country to use it clinically. Professor Mori, my main mentor, and I studied the electrophysiological actions of sevoflurane on the central nervous system, comparing it with other volatile anesthetics in preclinical studies at the request of Maruishi. Chapter 46, “A history of inhaled anesthetics”, is one of the most interesting chapters of this book. Various volatile anesthetics were developed as a result of advances in fluorine chemistry occurring during research into the atomic bomb (the Manhattan Project), and those of refrigerants. These stories are not well known by young anesthesiologists. I also participated in a project for introducing propofol to Japan, and we founded the Japan Society of Intravenous Anesthesia and Infusion Technology and the Asian Oceanic Society of Intravenous Anesthesia (AOSIVA). Propofol is used for maintenance rather than just induction of anesthesia. Propofol made way for total intravenous anesthesia (TIVA) and enhanced advances in the understanding of pharmacokinetics, particularly the concept of context-sensitive half time, and pharmacodynamics, such as interactions between hypnotics and analgesics. With the advances of pharmacokinetics, we can now simulate the blood levels and effect-site concentrations of drugs administered intravenously. In the aspects of pain control during anesthesia, epidural anesthesia and remifentanyl are the main regimens at present. Dr. Suwa (Chapter 31) describes the impact of epidural anesthesia with general anesthesia in Emperor Showa’s surgery in Japan. Monitoring during anesthesia has also had great growth during the last 40 years. At the time I started my anesthesia residency, we scrambled for a heart monitor

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because our department had only a few heart monitors, and we had never used a blood gas analyzer. Once, we used a mass spectrometer developed by professor Severinghaus, but simple bed-side monitors, such as a pulse oximeter, an anesthesia gas analyzer, BIS monitor, TOF watch, and FloTrac, have now become popular. The advances in monitoring are also well described in this book. We can now use new drugs, such as remifentanyl, rocuronium, and sugammadex. Anesthesia is now at an established stage, due to our predecessors' efforts.

This book describes not only histories but also episodes and events during the growth of anesthesia and related

fields. Experts in each field look back at their thoughts and issues. The editors explain the purpose of this book as “a story, not a recitation of pharmacology or physiology. It is not intended to educate the student in techniques or mechanisms. It describes the issues that shaped anesthesia, the incidents and humor, the anecdotes that put a human face to this wonderful specialty. We hope it shows the interactions between diverse forces that made this great specialty grow, and provides a sense of where those forces may take us in the future”. This is a “wondrous” book for people working in anesthesia-related fields.