



MODERN
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Volume 1

Chinese Surgery



Editor-in-Chief: Wu He-guang
Assistant Editor: Ran Rui-tu




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A comprehensive review of surgery in the
People's Republic of China



Edited by

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PREFACE

Within recent years, in the course of increasing international exchanges in the field of Health Sciences, many questions on various aspects of its development in China during the past three decades have been asked by visiting colleagues from abroad, particularly on the development and practice of health care in China. It has been felt that since most of the medical publications have been in Chinese, a language inaccessible to the majority of professionals in other countries, a brief review of the clinical and practical aspects of health care in China written in both Chinese and English would be of service in introducing medical practice in China to the medical profession at home and abroad.

The present volume is the result of collaborative efforts by specialists in the respective disciplines in clinical medicine of Sichuan Medical College, Chongqing Medical College, Shandong Medical College and Nanjing Medical College. Obviously, such an undertaking entailed the review of large quantities of publications of China and the contributors are to be congratulated for having successfully completed the selection of appropriate materials included in this space-limited volume.

For the benefit of the reader, it may not be out of place to emphasize that within the past three decades, the health care system at work in China has been, and still is, directed by two strategical principles, namely, 'Prevention First' and 'Scientific Development and Utilization of Traditional Chinese Medicine', while persisting along the way to modernization. But the foundation of success lay in the effective mobilization of social forces through public education and training of thousands of devoted medical personnel in the fight against disease and ignorance

and the establishment of community support for a health delivery system, however crude and simple, for the benefit of all.

The successful elimination of most of the communicable diseases, including venereal diseases and tetanus neonatorum, has been the result of public education, preventive measures, mass vaccination and timely diagnosis and treatment. The more delicate program of family planning, while basically dependent on public education, has been backed up by the availability and free distribution of contraceptives and free medical services. Collateral measures, with the objectives aimed at 'Healthy Births' and 'Better Rearing', such as genetic counseling and neonatal and maternal and child health care services, initiated in the major medical centers, have been taken by increasing numbers of hospitals and clinics. Nationwide organized investigations on traditional Chinese medicine have been repaid by the ground acupuncture has gained towards its recognition as part of the armamentarium of modern therapeutic measures, although much remains to be done before its possibilities can be fully assessed. Studies on traditional herb medicine have also been rewarded by its curative and adjuvant effects in many acute and chronic illnesses. Even in the management of delicate surgical cases such as severe burns and the replantation of severed limbs, reports of increased rate of success with the aid of herb preparations have been made.

Significant advances in the fight against malignancies, particularly in esophageal, nasopharyngeal and hepatic cancers, based on large-scale programmed epidemiological studies have been made in diagnostic, preventive and therapeutic measures.

Efforts to keep abreast of modern developments in clinical practice in the larger centers in fields such as organ transplantation, artificial organ implantation, the diagnostic and therapeutic applications of lasers and other aspects of biomedical engineering have also made encouraging progress. These will not be included in this book, however.

Given the relatively limited space available, no attempt at comprehensiveness and detailed descriptions has been made in any individual field and much valuable material has of necessity been regretfully omitted.

I should like to thank all the contributors who have written the chapters and sections of the book and the members of the editorial staff for their meticulous preparation of the manuscript and its translation. I should also like to thank the colleagues of the People's Medical Publishing House, Beijing for their valuable advice and assistance without which the publication of this book would not have been possible.

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Part 1



SURGERY

Chapter 1



GENERAL SURGERY

Ran Rui-tu

Clinical surgery in China has developed by leaps and bounds during the last 30 years from a poverty-stricken base to great successes in many aspects. This section on General Surgery provides an introduction to the following chapters where some outstanding achievements will be presented in detail, a brief general sketch of progress in the wide field of general surgery outlined, and a number of topics of common interest discussed.

Blood banking and transfusions have come into general use, and either whole blood or blood elements have been supplied by blood centers to both urban and rural hospitals for clinical purposes. Research work is also making progress in blood institutions. Frozen and dry plasma have been obtainable since 1956. Red blood cells, albumin and globulins are also available. Platelets or lymphocytes for special clinical purposes are supplied individually. Freshly prepared non-substrate hemoglobin solution, typing antigen free, is also available for use. Rh grouping is not routinely performed because its negative population is very small in China, being estimated as less than 1%. Methods of Rh(-) screening and identifying tests for patients requiring second transfusion are practical before matching with a donor of Rh(-). If this is not possible, treatment should be rearranged without blood transfusion. In recent years, the likelihood of blood

transfusion during operation has tended to diminish, and hemodilution or auto-transfusion techniques have been developing.

Ordinary infusion preparations are made in many hospitals by qualified pharmacists. Research on protein hydrolysate production from soybean or other materials started early, before 1940, and it is now extensively supplied. Crystalline amino acid solution of different formulas is also in daily use. Parenteral hyperalimentation and elementary diet are in general use.

Study on surgical wound infection stresses prevention rather than abuse of antibiotics. Prevention measures, such as ward ventilation, mouthwash days before operation, skin scraping immediately before operation, gentle handling, skillful handicraft, lessening of unnecessary exposure etc., are emphasized. Preventive antibiotics are not used in operations except in cases of inevitable contamination such as abdominal operations in which the gut lumen has to be opened, or biliary operations in which infection is present.

All common sulfa drugs, antibiotics and antiseptics are produced in China. New drugs are intercurrently introduced into clinical use on trial from institutional researches. The screening of Chinese medicinal herbs for effective treatment against infection is in progress. There are a certain number of Chinese herbal antipyretics which are found to be either bactericidal or bacteriostatic and directly attack the pathogen or indirectly assist the immune defence of the host. Snake bite venom poisoning – for instance, cobra bite – is terrible and life threatening, particularly to the inhabitants of the tropics and subtropics. Many kinds of She-yao (Chinese-made snake bite detoxicants) have been well known for years and of wide use in South-east Asia. The discovery in 1975 of the detoxicating potency of trypsin was a stroke of genius. Trypsin, an ordinary enzyme and an old-established drug, freely available and easy to use, was developed as the most effective antivenom drug by a group of workers on cobra venom of the Zoology Institute, National Academy of Science in Yunnan Province. A total of 336 cases of poisonous snake bite (44 severely affected) all recovered excellently without any disability³. Experimental studies demonstrated that trypsin was able to combine *in vitro* with the alkaline aminopeptide link in the snake venom molecule.

As to the care of critical surgical patients, studies on shock and its complications are progressing². An acute respiratory distress model has been made by intravenous injection of oleate. The ultrastructure of the lung in shock is being investigated. Pulmonary arterial pressure and blood flow are measured. An experimental model of disseminated intravascular coagulation has been made by thrombin for the study of the therapeutic effect of corticoids, heparin and other drugs. A model of Cushing's syndrome has been constructed for the study of renal changes. These studies have helped promote advances in intensive care measures. Many