

现代急救医学

● 李宗浩主编

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序 言

近20年来,不少国家十分重视发展急救医学事业,纷纷建立急救系统和开展急救医学的研究工作。它是基于这样的事实:人类活动空间的扩大、寿命的增长、生活节奏的加快、现代化程度的提高,以及交通运输的多样化等,使急症和各种意外事故的发生有了明显增高的趋势。对此,如不及时采取有效的现场急救和途中医疗监护,及医院内的延续强化救治,就有可能导致一些可以挽救的生命丧失救治的机会。

急救中心、急救站担负的院外急救,医院急诊科和危重症监护病房的后续治疗的有机配合,既构成了对危重病人救治的全过程,也是急救医学的基本内涵。

近年来,我国急救医学事业有了长足的发展。有些城市在急救站的基础上建立了急救中心,急救网在逐步形成,医院内的急诊和危重症的救治工作正得到加强。中华医学学会全国急诊医学学会和地方学会相继成立,召开了国内外、地区的学术讨论会,出现了一批质量较高的急救管理体制、心肺脑复苏以及各种危重症救治的学术论文,推动了我国急救医学事业的发展。

北京急救中心副主任李宗浩医师,多年来热心于发展我国急救医学事业。为了使这门新兴的涉及到众多学科的急救医学,在理论和实践上形成中国自己的特色,约请有关专家,主编了我国第一部急救医学专著《现代急救医学》。这本书包括了从急救体制到院外、院内急救工作的开展,从现场心肺脑复苏到转运途中的监测和护送,从各科常见急症到各种灾难事故的救治,从紧急情况下的徒手抢救到使用各种现代医疗设备抢救等多方面内容,立体地反映了我国急救医学触及到的各个学科的最新发展,凝聚了我国众多专家的知识 and 经验,是一部具有一定专业水平、质量较高的学科专著。

使我感到高兴的是,当代心肺复苏医学及世界急救、灾难医学学会创始人之一,美国匹兹堡大学国际复苏研究中心主任彼得·沙法(Peter Safar)教授专为李宗浩医师主编的《现代急救医学》撰写序言。我希望,我国急救医学工作者们在救死扶伤的医疗实践和学术活动中,不断总结和汲取国内外的经验和先进技术,为发展我国急救医学事业作出更大的贡献。

中华人民共和国卫生部部长

陈敏章 教授

1992年8月18日

FOREWORD

During the last twenty years, many countries have been increasingly emphasize emergency medicine, underscored by the establishment of emergency medical networks as well as emergency medicine research. Such a development may be attributed to the fact that expansion of human living space, increase in human life span, quickening of the space of life, modernization and the diversification of means of transportation all contribute to an increase in emergency medical as well as accidents. Therefore, some life-saving opportunities may be lost unless timely measures of on-the-spot emergency rescue and transportation of patient, under surveillance are adopted in addition to in-hospital intensive care.

Emergency rescue centers' emergency rescue operations and the follow-up in hospital intensive medical care constitute the entire organic emergency rescue process, and they constitute the basic concept of emergency medicine as well.

In recent years, China's emergency medicine has undergone significant development. Emergency medical centers and networks are being set up in some cities, and in-hospital emergency medical operation, have been upgraded. Local chapters of emergency medicine of the Chinese medical society are being set up; regional, national and international conference of emergency medicine have been convened; a series of significant papers on emergency medicine management, Cardiopulmonary-Cerebral resuscitation (CPCR) has emerged. As a result, development of China's emergency medicine has been pushed forward.

Dr. Li Zong-Hao, deputy director of Beijing Emergency Medical Center, has devoted himself to China's emergency medicine for many years. In order to develop China's emergency medicine with unique Chinese feature. Dr. Li invited experts to write Modern Emergency Medicine, China's first major work on the subject. The book deals with emergency medical system, pre-hospital and in-hospital rescue, on-the-spot CPCR, transportation of patients under surveillance, common types of emergencies, various kinds of disasters, CPR as well as the use of modern medical equipment. All these features reflect the latest development in China's emergency medicine, as well as the knowledge and of Chinese medical specialists. This piece of work is of high expertise and quality.

I am very glad that Dr. Li Zong-Hao's work was foreword by prof. Peter Safar, co-founder of CPCR and the World Association for Emergency And Disaster Medicine, director of the International Resuscitation Research Center, University of Pittsburgh, U. S. A. It is my sincere hope that China's emergency medical workers continuously learn from the experience and the use of advanced technology both in China and abroad. And contribute to China's emergency medicine in the spirit of healing the wounded and rescuing the dying.

Minister of The Ministry of Public Health
of The People's Republic of China
Professor Chen Minzhang M. D.

FOREWORD

Dr. Li Zong Hao and his colleagues must be congratulated for the creation of this first Chinese textbook on emergency medicine. As author-editor of the first English-American textbook on this subject (Schwartz et al, Saunders Publ.) and the first international teaching text on cardiopulmonary-cerebral resuscitation (CPCR) (Safar and Bircher, Saunders and Laerdal Publ.), I know how much labor of love is required to create comprehensive medical teaching texts.

Emergency medicine includes the management of a vast variety of conditions, from minor acute complaints to life-threatening or terminal events. I will comment only on the latter, recognizing that control of minor ailments is often equally important to give patients comfort, to help nature's ability to cure and to prevent life-threatening conditions.

Throughout the recorded history of man and particularly since the advent of scientific medicine in the mid-1800s, more attention has been paid to the beginnings of life and to chronic diseases than to the pathophysiology of acute dying processes and their reversibility. Resuscitation concerns the reversal of terminal states (such as traumatic shock) and clinical death (cardiac arrest). The science of resuscitation medicine may be called "resuscitability" or "reanimatology" (Negovsky). Resuscitation medicine is a multidisciplinary endeavor and, combined with intensive care (critical care) medicine, the delivery arm of modern resuscitation. Modern resuscitation from airway obstruction, apnea and pulselessness in victims of heart disease, trauma, and other emergencies, is only 30 years old. Effective resuscitation outside the hospital was essentially nonexistent before the 1950s. Cardiopulmonary-cerebral resuscitation (CPCR) consists of basic and advanced life support (i.e., emergency resuscitation) and prolonged life support (intensive care). The results so far of attempts to reverse terminal states and clinical death have been dramatic, compared with the results one generation ago, but are still suboptimal. One reason is poorly organized delivery systems. This is where emergency medicine has a great challenge.

The public health challenge for emergency medicine lies in the development of cost-effective community-wide services for the delivery of the life support chain. This consists of life supporting first aid by laypersons, which should include CPR basic life support without equipment, advanced life support at the scene and during transportation by trained ambulance personnel, and prolonged

life support and definitive therapy in strategically placed major emergency hospitals. Coordinating the role players in this life support chain is a major challenge. In the USA we are trying to accomplish this through community councils of emergency medical services. In socialist countries, the authoritative approach through health care agencies has been effective.

The philosophic challenge for resuscitation medicine as part of emergency medicine lies in the fact that devoting ones energies to the restoration of lives cut short before fulfillment is a declaration that human life is intrinsically valuable. Medicine in general and resuscitation and emergency medicine in particular make human values reach beyond the species-oriented random chances of nature, by focusing on the individual whose time to die has not yet come. Medicine must be practiced with reason and compassion. This requires that persons in the terminal stages of an incurable, hopeless condition should be permitted to die without pain and with dignity. On the other hand, the estimated one-quarter of all deaths that occur in individuals prior to old age or senility and in the absence of an incurable disease, represent opportunities for resuscitation attempts. The goal must be survival with human mentation to permit quality life. The logistical priorities, of course, must be adjusted to the specific umstances in each country and region of the world.

Finally, emergency and resuscitative medicine need further development based on sound scientific principles. Emergency medicine needs research in order to flourish in the future—research at multiple levels, from the cell to the community. Laboratory studies and clinical research should cross fertilize each other. Links between laboratory researchers and clinicians have taught clinicians “titrated care,” which differs from the usual medical practice of “care by rounding and prescribing.” Titration, which is essential for the management of acutely life-threatening emergencies, requires constant presence of the health professional at the critically ill patient's side, to apply continuous feedback from monitoring (evaluation) to rapid action. This field is expanding rapidly in knowledge. Therefore, this book will need frequent future revisions.

The world is looking at China with expectation, to learn how this most populous nation of the world, which has been able to develop highly motivated and well-organized social systems, will deliver the potentials of modern emergency and resuscitative medicine, integrated with traditional grass-root medicine. Researchers and providers in different countries should learn from each other, to maximize the reduction of premature deaths and crippling worldwide.

Peter Safar M.D.

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序 言

对李宗浩医师及其同事们编著的中国第一部急救医学专著表示祝贺。我作为该专业的第一部英-美教科书 (Schwartz 等, Saunders 出版) 和关于心肺脑复苏 (CPCR) 的第一本国际教科书 (Safar 和 Bircher 著, Saunders 和 Laerdal 出版) 的编著者, 我深知编写一部综合性医学专著需要付出何等巨大的劳动。

急救医学包括多种不同情况的处理, 涉及轻微的急症到有生命威胁或临终的状态。我将仅对后者加以评论, 但应认识到对于给病人以舒适, 帮助自然的力量治愈疾病和预防威胁生命的情况发生, 控制轻微病症同样重要。

统观人类有记载的历史, 尤其是自从19世纪中叶科学医学的出现以来, 对于生命起始与慢性病的关注多于对急性死亡过程的病理生理及其可逆性的研究。复苏所关心的是临终状态 (例如创伤性休克) 和临床死亡 (心搏停止) 的逆转。复苏医学可称为“复苏学” (Negovsky), 复苏为多学科措施, 并与强化监护 (重症监护) 医学这一现代复苏的实施手段结合在一起。从气道阻塞、心脏病患者的呼吸暂停与脉搏消失、创伤和其他急救开始的复苏, 仅仅30年的历史。医院外的有效复苏在本世纪50年代以前基本上不存在。心肺脑复苏 (CPCR) 包括基础的和高级的生命支持 (即急救复苏) 及延长的生命支持 (强化监护)。至今为逆转临终状态和临床死亡所作努力之结果与前一代人的结果相比, 引人注目, 但仍不能令人满意。一个原因是传递系统组织得不好。这正是急救医学面临的巨大挑战之处。

健康保健对急救医学的要求在于发展提供生命支持一系列措施的花费合理、范围广泛的服务。这包括非专业人员进行的生命支持急救 (其中包括不用医疗设备的心肺复苏基础生命支持), 现场和由经过训练的救护车人员转送过程中的高级生命支持, 以及在就近的主要急诊医院延长的生命支持和确切治疗。如何协调这一生命支持系列中各个部分人员是一个重要问题。在美国, 我们正试图通过急救医学服务社区联合机构来实现这种合作。在社会主义国家, 通过健康保健的官方手段是行之有效的。

对作为急救医学组成部分的复苏医学的哲学挑战在于如下事实, 即致力于在生命终结之前恢复暂停的生命, 表明人类生命内在的价值。通过注视其死亡时间尚未到达的个体, 医学, 尤其是复苏和急救医学, 使人类价值超出自然界物种生存竞争偶然机率的范畴之外。进行医疗实践必须合乎情理和富有同情心。这需要应允许患有不可治愈, 无希望疾病的终末状态病人没有痛苦而端庄地死去。另一方面, 据估计四分之一的死亡发生于老年或衰老之前, 并且无不治之症, 这代表着复苏成功的可能性。目标必须是有人类思想与心理活动的存活, 才能保证有质量的生活。当然逻辑重点必须依据世界上每一国家和地区的特殊环境判定。

最后, 急救和复苏医学需要在坚实的科学原则的基础上进一步发展。急救医学需要科研, 其未来方可繁荣兴旺——科研应在多水平开展, 从细胞到社区人群。实验室研究和临床研究应交叉, 互相促进。实验室研究人员与临床工作者之间的联系已告诉临床工作者进行“滴定医疗”, 它不同于“查房和开处方”的通常医疗实践。对于有紧急生命威胁的急救处理必不可少的滴定, 需要在危重病人身边持续安排有医疗保健专业人员, 实现从监测 (评价) 到迅速采取措施的不断反馈。这一领域的知识迅速增长。因此, 该书在未来将需经常修订。

世界正以极大期望注视着中国，以便了解这个已经能够建立生机勃勃和组织良好社会体系的人口最多的国家，将如何发展现代急救和复苏医学的潜力，并与传统的医学相结合。不同国家的研究者与急救医疗保健提供者应当互相学习，最大程度降低世界范围的提前死亡和残废。

Peter Safar 医学博士，教授
美国匹兹堡大学国际复苏研究中心主任
世界急救医学、灾难医学学会荣誉主席
1992年6月

前 言

自本世纪70年代以来,急救医学事业有了长足的发展。这种发展,从本质上讲是对传统急救医学事业的重大变革。概括起来有以下几个特点。

一是专业急救机构已具备了在现场开展及时有效的救治,并在医疗监护下运送病人的能力。

二是上述专业急救机构由城市、地区单一的或若干个组织逐步联合协作,形成了城市、地区的专业急救医疗服务系统,并为社会服务、国际间开展急救业务活动奠定了基础。

三是社会已较全面充分地评估了现代急救事业与人类生活的关系,从而给予了较有力的支持。其结果不仅极大地扩充了急救资源,更重要的是动员广大人群参与急救活动。

四是急救医学的学术内容,已由院外急救、医学监护运输、院内急诊、院内监护危重症监护医学等融合形成了急救医学学科,并逐步延伸出分支,如构成有特色的灾难医学。

众所周知,急救工作是医疗卫生事业的一个重要组成部分。它能否卓有成效地开展,不仅反映了一个国家、地区、城市卫生部门的组织效益和医疗水平,而且也代表了这个社会在公共福利、部门协调、民众意识等方面的综合管理能力和科学文化素质。

中国急救医学事业的发展一直受到了党和政府的重视和支持,尤其近10年来引起了社会较广泛的关注。在实践中,已初步形成了有中国特色的急救医疗服务系统。

1980年,中国卫生部在北京召开了建国以来第一次十城市(北京、天津、上海、南京、杭州、哈尔滨、长春、重庆、西安、广州)急救工作会议,并颁发了中华人民共和国卫生部《关于加强城市急救工作的意见》的文件。文件指出了急救工作对于国家建设和人民健康的重要作用;明确了其性质和任务;对建立健全急救站组织,从以院外抢救为主的急救站到医院建立急诊科等作了一系列的规定;同时成立了中国急救医学研究会,加强了急救机构、急救医学工作者的联系和学术交流。这次会议及颁发的文件,有力地促进80年代改革开放形势下急救医学事业的发展,开创了我国急救事业发展的新阶段。

卫生部和地方卫生行政部门近10年来,把发展健全急救机构,建立急救网络,逐步形成急救医疗服务系统,列为其重点工作。从改革到管理,从技术到财力,都给了有力的支持。北京从1982年开始筹建具有现代化设施的北京急救中心,1988年已建成全面运转;重庆急救中心也相继建成。其他一些城市也在筹建急救中心或扩建、完善急救站的机构和功能。这些专业急救机构已逐步和医院急救科、危重症监护病房,以及社会有关部门(如红十字会、交通运输机构)建立了较密切的联系,人们的社会急救意识,“社会急救网”也在开始编织、成形。

在急救体制变革并日益健全中,我国急救医学的学术水平在不断提高,已初步形成了一套院外抢救、途中医疗护送、院内急诊科和重症监护抢救的急救理论与实践模式。中华医学会为形成急救医学学科作了大量的工作,积极鼓励、支持急救医学工作者从事学术活动,1987年正式批准成立了中华医学会全国急诊医学学会。

在这里,值得提出的是,80年代在建设我国现代化急救中心的进程中,意大利政府给予了真诚友好的支持。世界银行的对华援助中,对发展中国急救事业尤其在对中等城市、经济

处在发展阶段的城乡给予了很大的关注，与中国卫生部进行了卓有成效的合作。

在国内急救医学模式初步形成、急救医学理论日臻成熟，国际合作、交流日趋广泛之际，我萌发了编写本书的强烈愿望。我有幸结识的一批国内外享有盛名的专家，对我的工作给予了真诚的帮助。

前中国卫生部长钱信忠博士，多年来对我及我的工作给予谆谆的教导和真诚的帮助；现任中国卫生部长，中华医学会会长陈敏章教授，在百忙之中为本书撰写序言；中国科学技术协会副主席，中国医学科学院名誉院长吴阶平教授，鼓励我主编这本专著，并担任本书名誉主编；当代心肺复苏医学，世界急救、灾难医学学会创始人之一，美国匹兹堡大学国际复苏研究中心主任彼得·沙法教授 (prof. Peter Safar) 关心和帮助我在急救医学道路上前进，当他得知我编写本书的详情后不久，即寄来了专为本书写的序言。我国著名麻醉、急救专家，北京医科大学临床医学研究所所长谢荣教授；天津急救医学研究所所长王今达教授；心脏病学专家陶寿琪、顾复生教授等，对本书的编著审定也作了不少的工作。中国医学科学院协和医院、北京医科大学、天津急救医学研究所、解放军总后医学专科学校，以及兰州、天津、西安、上海、海口、广州、杭州等地医院、急救站、急救中心的同事们，对本书的形成都分别给予了指导和帮助。在此，不能一一列出这些单位和专家的名字，但我内心是深深地感谢他们的。

为了使本书达到既是学术专著，又不失为指导急救医疗工作的实用参考书的要求，我尽可能地邀请国内在学术、临床方面颇有影响的专家撰写其最“善长”的章节。国内外急救体制部分由中国医学科学院情报所的领导人黎壁莹、张虎林研究员撰写；急救仪器及急救装备标准化分别由北京电子医疗器械厂方迪英主任工程师和重庆急救中心陆国兴副主任等编写；临床各科急症主要由北京医科大学张树基、许韵玉、沈渔邨、胡大一教授，天津市中西医急腹症研究所所长郑显理教授，中国医学科学院协和医院郎景和副教授等撰写；急性中毒部分主要由北京职业病研究所领导人王淑芬教授负责编写，她在这个领域里有着丰富的经验。灾难医学尤其是海难和空难，近年来已引起了国内外急救医学界和社会的普遍关注，本书也用了较多的篇幅来论述我国在这方面的经验。海上救护由中国人民解放军海军舰艇航空卫生处处长王超政组织编写；空难由中国民航卫生处任纯泽处长编写；地震伤则请参加1976年唐山大地震抢救的天津市医学专家郭世绂主任组织编写。由于篇幅所限，还有数十位专家分别参加了有关章节的编写，他们的姓名列在书中的相应部分。

我认为，现代学科的交叉渗透，临床医学的发展和丰富，奠定了急救医学的理论和实践基础；而人类传统的“救死扶伤”友爱精神的发扬光大，则奠定了急救医学发展的社会基础。因此，从这个意义上讲，随着现代科学技术的发展，随着社会精神文明水平的提高，急救医学事业的前景是灿烂的。

李宗浩

1992年4月

Forward

Since 1970s, great progress has been made in emergency medicine. In essence the progress is an important breakthrough to the traditional emergency medicine. Main features can be summarized as follows.

First: Specialized organizations have been established with the purpose of providing timely on-the-spot emergency rescue and to transport patients under surveillance,

Second: The above-mentioned organizations have gradually made efforts to form town or regional emergency service networks, which have laid foundations for social service and for the implementation of an international emergency service.,

Third: The society has fully appraised the relationship between modern emergency medicine and human life. Because of this, it has given stronger support to the medicine. As a result, emergency resources have greatly expanded. More and more people have been mobilized to take part in the first-aid activities,

Fourth: The contents of emergency medicine relied for a long time on the science of clinical medicine. It was difficult to form an emergency medical science. Now that emergency medicine has been established. It includes pre-hospital emergency rescue, medical transport under surveillance, emergency diagnosis within hospitals and monitoring patients in critical conditions within hospitals. It has also formed its own medical branches such as disaster medicine.

It is known to all that emergency work is an important component of medical treatment and health care. The work not only reflects the organizational efficiency and the standards of medical treatment, but also represents the comprehensive management ability and scientific and cultural elements in areas of public welfare, departmental cooperation and the awareness of the masses.

Emergency medicine in China has received the attention and support of the Chinese Government and the Communist Party of China. During the last 10 years or more, it has aroused the interest of the society. Practically an emergency service network with Chinese characters has been formed.

In 1980, the Chinese Ministry of Public Health convened a conference on city emergency work for the first time. Representatives of 10 cities (including Beijing, Tianjin, Shanghai, Nanjing, Hangzhou, Harbin, Changchun, Chongqing, Xi'an, Guangzhou) took part in the conference. At the conference the

ministry promulgated the "Suggestions on Strengthening Emergency Work of Cities". The document pointed out the important role of emergency work in the State construction and people's health; made clear its nature and task; and made a series of regulations regarding the setting up of emergency service networks and emergency stations for prehospitals rescue. During the conference the China Emergency Medical Research Society was founded in order to strengthen contacts and academic exchanges of emergency medicine organizations and emergency medical doctors. The conference and its document greatly improved the development of emergency medicine in 1980s, giving way to a new stage in the development of first-aid medicine.

During the last 10 years, the Ministry of Public Health and local health departments have listed the development of emergency treatment organizations and the establishment of emergency networks as their major tasks and given their strong support to these organizations. In 1982, Beijing planned to set up a modern emergency medical centre which was built and put into official operation in 1988. Following this, Chongqing emergency Medical Centre was also built. And now other cities are ready to set up their emergency centres or to expand their centres. Specialized emergency organizations have gradually set up close links with the emergency medical departments inside hospitals and emergency medical wards.

In the improvement of emergency medical system, the academic level of China's emergency medicine has also gradually upgraded. And emergency academic ranks trained in pre-hospital medical rescue, transporting medicine, emergency medical science and surveillance medicine inside hospitals are being formed. The China Medical Society has done a lot of work in the growth of emergency medicine. To support emergency medical personnel in their academic work, the All China Emergency Medicine Society under the China Medical Society was founded in 1987.

Here it is worth pointing out the strong support granted by the Italian government in the process of setting up China's modern emergency medical centres.

The World Bank was also deeply concerned about sustaining the development of China's emergency medicine, especially as far as medium-sized cities, towns and villages are concerned and began a fruitful cooperation with the Ministry of Public Health.

My career gave me the opportunity of experiencing and taking part in many key events of China's emergency medicine in the past more than 30 years, and I have got acquaintance with a number of famous medical experts at home and abroad. They have influenced me and rendered me concrete guidance in my daily work and in the process of writing this book. This is a key element that encourages me to finish this book.

Dr Qian Xinzong, former minister of Public Health, instructed and helped me in the formation of my emergency medical background and in my work of setting up the Beijing Emergency Medical Centre. Professor Chen Minzhang, minister of Public Health and president of the China Medical Society, helped me in my activities on developing emergency medical cause in China, especially on how to develop air rescue in China. Professor Wu Jieping, honorary president of the China Academy of Medical Sciences and vice-president of the China Association of Medical Technologies, has played an important role in the development of Chinese medical sciences. He has always encouraged me to compile this book and asked me to be the chief editor. He himself is the honorary chief editor of the book.

Professor Peter Safar, is Known in the field as "the father of modern resuscitation" president of the World Association for Emergency and Disaster Medicine, director of the International Resuscitation Research Centre of the University of pittsburgh in the United States, He helped me in my emergency medical career and sent me the latest medical data. Three years ago, I told him about my idea, still in embryonic form, of writing this book. Soon afterwards, he sent me the preface he wrote for the book as a way of encouragement.

Professor Xie Rong, Chinese famous expert in anesthesia and emergency medicine and director of the Clinical Medical Institute under Beijing University of Medical Sciences, Professor Wang Jinda, director of the Tianjin Emergency Medical Research Institute, Tao Shouqi and Professor Gu Fusheng, experts in heart diseases also did their part in revising the book. Help and instructions for this book also came from the Beijing Union Hospital under the China Academy of Medical Sciences, Beijing University of Medical Sciences, Tianjin Emergency Medical Research Institute, the Special Medical School under the General Logistics Department of the People's Liberation Army, and hospitals and emergency medical stations in Lanzhou, Tianjin, Xi'an, Shanghai, Haikou, Guangzhou and Hangzhou. I could not enumerate them all here, but I would thank them all from the deep of my heart.

Facing the great variety of branches of emergency medicine, I adopted the principle of making the book complete and objective in contents, scientific representation of the history, status quo and development of medicine and of connecting theory with practices. The book has a part of special high level academic works but contains also practical works, and can be considered a guidance to emergency medical treatment. I have tried my best to invite experts to write special subjects and to join the editing work.

In the general introduction, Li Biying, director of the Information Institute under the China Academy of Medical Sciences and Zhang Hulin, of the same institute, undertook to write the domestic and world emergency medical system; Fang Diying, chief engineer of the Beijing Electronic Medical-treating Instru-

ments Factory, and Lu Guoxing, vicedirector of Chongqing Emergency Medical Centre, wrote about the emergency medical instruments and emergency medical equipment standardization respectively.

In sub-introductions, the articles on clinical acute diseases for different medical departments are mainly written by Professor Zhang Shujin, Professor Xu Yuanyu, Professor Shen Yucun and associate professor Hu Dayi of the Beijing Medical University, Professor Zheng Xianli, director of the Tianjin Institute of Acute Abdominal Diseases of Chinese and Western Medicine, Lang Jinghe, associate professor of the Xiehe Hospital under the China Academy of Medical Sciences according to their respective specialities. The part of acute poisoning is written by Wang Shufen, leading person and professor of Beijing Professional Diseases Research Institute. She has rich experience in this field.

Disaster medicine, especially sea and air disasters, one of the main concerns of emergency medical circles and society at home and abroad, has also been dealt with in this book. The part concerning medical rescue was written by Wang Chaozheng, chief of the health department of the air force belonging to the navy of the People's Liberation Army; the part concerning air disaster was written by Hou Chunyi, chief of the health department of the Civil Aviation Administration of China. Guo Shifu, a Tianjin medical expert who took part in the medical rescue after 1976 Tangshan earthquake, organized the editing of the earthquake injuries. As there are limited space, I will not list them all here, I will mention them in the following articles.

I believe that the civilization of present society has formed the management system for the modern emergency medical treatment services; the crossed specialities and the development and richness of clinical medical science have laid a foundation for the academic practices and the theory of emergency medicine; developing the traditional fraternal spirit of "heal the wounded and rescue the dying" has formed the idea of philosophy and medical virtue of self-rescue and mutual rescue. So, in a certain sense, with the development of emergency medicine and the close co-operations among emergency workers in different countries, the progress of the modern Chinese emergency medicine will add fuel to the flames for the progress of the present civilization.

Li Zonghao M.D.

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