骨质疏松症
OSTEOPOROSIS

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内 容 提 要

本书是我国第一本介绍老年人及各种疾病所致骨质疏松症的病因、预防与治疗的专著。全书分为四篇。第一篇“总论”分为三章，从一般、显微及超微结构水平介绍了骨骼系统及其组织和细胞的结构、形态与功能，骨代谢及调节，骨质疏松症的病理、病因、诊断及治疗。第二篇“临床各论及实验研究”收入了53篇国内外专家的研究论文与综述。第三篇“流行病学”收入了24篇我国各地各类人群骨矿物质含量及骨质疏松情况的调查结果。第四篇“中医肾主骨理论、研究与实践”阐述了现代医学对肾虚证和肾主骨理论的研究及中药对治疗骨质疏松的作用的研究。

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编辑委员会

序

随着医学的不断进步，人们对提高生活质量的要求也越来越高。以往一些被视为人体“小毛病”逐渐引起人们的更多注意，从而扩展了医学研究的范围，深化了医学研究的内涵，促进了医疗保健水平的提高。

《骨质疏松症》正是在这样的背景下应运而生的。本书作者中既有知名的骨代谢病专家，也有年轻有为的新秀，他们取材于浩瀚医海，拮取于不同角度，围绕着骨质疏松症进行了深入的阐述与论证，发表了许多研究成果，有些观点具有新意。本书不仅着眼于当今世界的医学动态，还努力发掘祖国医学宝库，从中汲取了大量宝贵的资料，可供中西医务人员参考。

纵览全书或有意犹未尽之感，医海探寻，学无止境。还望作者们继续攻关，探微集英，多收集一些读者们的反馈意见，再注心血，为本书再版增添新色。

陈敬章

1991年12月5日

FOREWORD

Following the advancement of the medical sciences, people are demanding more and more health life. Some ailments formerly regarded as immaterial are now demanding more and more attention, thus the range of medical research is extended, the connotation of medical study is deepened and the level of medical and health work is raised.

This book, " Osteoporosis" is compiled against this background. Among the authors, are famous specialists on bone metabolism, and young promision scholars. Centering on the subject of osteoporosis, they draw extensively from vast medical literatures to support their arguments. This book also contains many achievements in medical research, of which some are published for the first time. It deals not only with the recent developments in medical sciences in the world, but also digs into the treasure-house of the traditional Chinese medicine. It is an important reference book for medical workers both in traditional Chinese and in Western medicine.

I have read through the book and found it is comprehensive but not exhaustive. Of course, medical science is too extensive to be exhaustive. However I hope that the authors will continue to collect new achievements in medical research and feedbacks from readers, so as to make the second edition more readable.

Chen Minzhang
Minister of Health,
the People's Republic of China
December 5, 1991

前　言

随着人口寿命的增长和老年型社会的形成，作为老年性疾病之一的骨质疏松症及骨质疏松性骨折使越来越多的人深受其害，许多人因此而长期遭受肉体上的痛苦，甚至致残及早逝。随着患者的增加，医疗费用的上涨，给许多家庭和社会带来了巨大的精神压力和经济压力。因而引起了国内外广泛关注。目前我国老年人数逐年增加，经过我们近几年的调查研究发现，在我国这方面的问题同样是严重的。

尽管我们的祖先在春秋战国时期就对骨质疏松有不少论述和研究，但目前我国在这一领域里还未进入世界先进行列。然而，令人欣慰的是近年来我国医学科学工作人员，从我国实际情况出发，做了大量的调查研究工作，取得了可喜的研究成果。本书就是在这种情况下编写的。

全书分四篇。第一篇（总论）共分三章，从一般、显微和超微结构水平阐述了骨骼系统及其组织和细胞的结构、形态和功能，骨代谢及其调节，骨质疏松症的诊断和治疗。第二篇（临床各论和实验研究）共收入53篇临床和基础医学的研究论文。第三篇（流行病学）共收入24篇流行病学调查论文。第四篇（中医肾主骨理论、研究与实践）共分三章，阐述了肾主骨理论，现代医学对肾虚证和肾主骨理论的研究及中药对治疗骨质疏松的作用的研究。

本书在编写过程中，吸取了近年来国内外有关骨质疏松症方面的大量最新资料，也总结了我们近几年来的经验和研究成果。书中绝大部分图表和照片都是自己绘制和拍摄的。我们编写本书的目的是希望能够对我国的骨质疏松症的研究、诊断和治疗起到一定的推动作用。

在编写过程中，由于作者较多，因而在笔调、风格和体裁方面，全书未能完全统一规范。但我们力求做到通俗易懂、深入浅出，突出重点，使一些不懂医学的中老年人也能看懂，以利于防病治病和自我保健。

为了编好这本书，主编曾收集了大量国内外最新文献，组织了国内百余名作者撰写了近200篇质量较高的文章。但由于受篇幅所限，其中有一部分文章尚未收录，在此向这部分辛勤的作者表示深切地歉意。

初稿完成后，在北戴河参加审稿的有：耿德章、刘忠厚、马述仕、薛延、王石麟、房德元、刘鹏、刘成林、周倜、张大新、王维力、丁桂芝、王志清、王际孝、李占魁、王洪复、吴杰、肖丹、孟昭亨、郑少雄、金世鑫、郭如意、刘玉槐、张纪淮、张兴鹏、张学中、刘建立、程国钧等。

为了提高本书的科学性和实用性，减少疏漏，把好质量关，我们特地聘请了徐彤、李景学、郭世绂、伍汉文、朱云龙、张云祥、叶惠方等老专家、老前辈作为本书的顾问，他们分别对书中有关的章节做了认真细致的审阅和修改。在此，我们向他们表示衷心的感谢。

中日友好医院院长耿德章主任医师，作为本书的名誉主编，对本书的写作、审阅和出版给予了极大的支持和帮助。

副主编马述仕、王石麟主要负责第一篇的编审工作；副主编薛延副研究员主要负责第二篇的编审工作；编委肖丹、王琪、褚保成分别负责第三、第四篇的编审工作；常务副主编王石麟、和编委潘子昂对全部稿件做了编审和修正，并负责本书目录、摘要、参考文献和作者

索引等编审工作。

化工出版社任惠敏责任编辑，工作抓得非常紧，她对本书书稿的完成及出版起了重要作用。因此，可以说本书是来自全国许多单位的专家、作者和出版社共同努力的结果。

尽管如此，面对医学科学的迅速发展的现状，作者们虽然试图努力编好本书，但由于本书涉及面较广，而编者水平有限，加之时间仓促，难免有疏漏和错误之处，敬请有关专家、读者批评指正。

编　者

1991.9.北京

PREFACE

Due to the increase of human being's life and formation of gerontal society, the osteoporosis and osteoporotic fracture, as one kind of the gerontal diseases, cause serious harm to people increasingly. A number of people suffer from pain for a long time, even are maimed and die too early. As the increase of patients and the rise in price of health service, families and society are brought about the tremendous troubles in mind and economy. So the extensive attention is taken on the osteoporosis and the osteoporotic fracture in the world, In our country, according to the investigation taken in latest years, the number of gerontal person increases year after year, the problem in this respect is also serious.

Even though our ancester had had many brilliant expositions and studies on osteoporosis in Spring and Autumn Period and Warring States, but at present our country has not entered the advanced ranks in study of osteoporosis. However, what we are gratified is that the medical workers in our country have finished surveys and researches, and scored the great successes on the basis of existing situation. This book was exactly compiled under this condition.

There are four parts in this book. Part one, general, includes three chapters. They expound skeleton system and its tissue, structure, morphology and functions from macro-, micro-and ultramicro-levels; bone metabolism and its regulation; diagnosis and therapy of osteoporosis.

Part two, clinical various aspects of osteoporosis and experimental study, includes fifty-three papers in clinical and preclinical medicine.

Part three , epidemiology, includes twenty-four papers on epidemiologic investigation.

Part four, the theory, research and practice of kidney controlling bone, includes three chapters, they are the theory of kidney controlling bone; study about syndrome of renal deficiency and theory of kidney controlling bone with modern medicine; and therapeutic effect of Traditional Chinese Medicine on osteoporosis.

In the course of compiling this book, we absorbed the quintessence in the latest literatures on osteoporosis in the world, and summarized the recent experiences and research results. The most of figures and tables were taken and drawn by ourselves. The purpose of compiling this book is the promotion of the study, diagnosis and therapy in osteoporosis.

Because of the many authors of this book, the unified standard in style and type of papers might be not given out. But we made them easy to understand, explained the profound in simple terms, and stressed the main point of view as far as possible. So that, the middle and old age people can understand them easily, and use them for preventing diseases, curing sickness and self health caring better.

Director Liu Zhonghou, the chief editor, collected a lot of recent literatures in the world for compiling the book, and organized more than one hundred authors to write about two hundred papers of high quality. Due to the limited space in this book, some papers are not adopted. Please accept our apologies to those authors.

After accomplishing the first drafts, Geng Dezhang, Liu Zhonghou, Ma Shushi, Xue Yan, Wang Shilin, Fang Deyuan, Liu Peng, Liu Chenglin, Zhou Ti, Zhang Daxin, Wang Weili, Ding Guizhi, Wang Zhiqing, Wang Jixiao, Li Zhankui, Wang Hongfu, Wu Jie, Xiao Dan, Meng Zhaoheng, Zheng Shaoxiong, Jin Shixin, Guo Ruyi, Liu Yuhuai, Zhang Jihuai, Zhang Xinpeng, Zhang Xuezhong, Liu Jianli, Cheng Guojun and so on checked and approved the all drafts in Beidaihe in 1990.

In order to enhancing the scientific level and practical property, and lessening the omits, we specially invited the specialists and seniors, Xu Tong, Li Jingxue, Guo Shifu, Wu Hanwen, Zhu Yunlong, Zhang Yunxiang, Ye Huifang as our advisers. They checked carefully the related sections respectively, we hereby express our thanks.

Mr. Geng Dezhang, the president of China-Japan Friendship Hospital and chief physician , as honorary chief editor gave us great support and help to compile, check and press this book.

Deputy chief editor Ma Shushi, the director, was in charge of editing and checking papers in part one. Deputy chief editor Xue Yan, the associate researcher, was in charge of editing and checking papers in part two. Xiao Dan, Wang Qi, Chu Baocheng, the editors, were in charge of editing and checking the papers in part three and four. Standing deputy chief editor Wang Shilin and editor Pan Ziang edited and revised the all papers and were in charge of compiling and checking the contents, abstracts, references and index of authors.

Miss Ren Huiming, the editor in charge of Chemical Industry Press edited the whole book night and day, ensured to press smoothly in limited time. She played the important role in accomplishing and publishing this book. So we can say that this book is the fruit of collective labour of authors, specialists, editors and editor in charge.

All authors tried to compile the book better, because of a wide range dealed with in this book, the fact of rapid development in science, the limited level of compiling and limited time, the omits and errors were difficult to avoid. So the related specialists and reading public are kind enough to give us your opinious.

Editors

September, 1991

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