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Edited by
N.M. Siafakas



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Management of Chronic Obstructive Pulmonary Disease

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Editor in Chief
K. Larsson

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The Guest Editor



N.M. Siafakas

Nikos Siafakas is Professor of Pneumonology at the Dept of Thoracic Medicine of the University Hospital of Heraklion, Crete, Greece. He is the author of more than 150 scientific papers and has also edited two books. In 1980, Dr Siafakas received his PhD degree on “Aspects of pulmonary mechanics in health and disease” from the University of London, London, UK. He is a member of numerous scientific organisations and an Honorary Fellow of the Royal College of Physicians, London. Dr Siafakas has served various posts within the European Respiratory Society (ERS), including the Executive Committee and the ERS School.

Preface

Chronic obstructive pulmonary disease (COPD) causes enormous distress and generates immense cost worldwide. The problem is growing, particularly in the third world, and it has been predicted that COPD will become the third most common cause of mortality in the world in 2020. As the major cause of COPD is tobacco smoking it is of utmost importance that scientific societies all over the world aim to change smoking habits and reduce smoking prevalence. Smoking cessation is also the most effective treatment of COPD, both as disease prevention and as treatment in already established disease.

Since the 1970s, therapeutic nihilism has moved towards a more optimistic attitude regarding therapeutic alternatives in COPD. Research focused on inflammatory and physiological mechanisms has substantially increased during the last 10 years. This has led to an increased understanding of the pathophysiology of the disease, which has resulted in improved treatment. Thus, in parallel to smoking-cessation programmes, other treatment modalities have been shown to be successful. Physiotherapy and pharmacotherapy have been extensively studied and the knowledge regarding what these therapeutic approaches can offer is constantly growing. The importance of nutritional aspects and adjustment in daily life activities have made dieticians and occupational therapists important members of the treatment team. Vaccination programmes, treatment of infections and lung volume reduction surgery are other therapeutic alternatives that have contributed to the improved care of COPD patients.

It is now 8 years since the first *European Respiratory Monograph* on "Management of Chronic Obstructive Pulmonary Disease" was published and a lot has happened during this time. Therefore, there is an urgent need to raise this subject again and it is my pleasure to present an updated version of the previous COPD Monograph, which forms a comprehensive overview of most aspects of this serious disease.

K. Larsson
Editor in Chief

INTRODUCTION

N.M. Siafakas

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The present, new edition of the *European Respiratory Monograph* on the "Management of Chronic Obstructive Pulmonary Disease", introduces new developments in the area of chronic obstructive pulmonary disease (COPD) since the first edition in 1998.

Since 1998, two major international guidelines for the management of COPD have been published: the Global Initiative for Chronic Obstructive Lung Disease (GOLD) in 2001 and the guidelines of the American Thoracic Society/European Respiratory Society (ERS) Task Force in 2004. Even the definition of the disease has changed since 1998 and now incorporates aetiological factors (smoking), pathogenetic mechanisms (inflammation), early staging (GOLD stage 0), and systemic consequences and optimistic views that the disease is preventable and treatable.

Over the past 8 yrs, significant developments concerning the pathogenesis of the disease have emerged; for example, inflammatory pathways, apoptosis, impaired remodelling *etc.* In addition, various cell types have been shown to play a key role in the pathogenesis, such as CD8+ lymphocytes, dendritic cells, type II pneumocytes and epithelial cells. The genetic background of the disease has also been extensively investigated.

Moreover, new significant modes of treatment have become available and have had to be incorporated into this second edition. An example of this is the new long-acting anticholinergics. Therefore, most of the original chapters have been completely rewritten, some have been updated and new chapters have been included.

I am extremely grateful to all the authors who have contributed for their hard work and for supporting the efforts of the ERS in producing high-quality, comprehensive *European Respiratory Monographs* for its members. However, this Monograph is primarily designed for clinicians and fellows in training.

I do hope that reading this *European Respiratory Monograph* "Management of Chronic Obstructive Pulmonary Disease", a disease that still is a leading cause of morbidity and mortality in the world, will give the interested reader the appropriate data and as much pleasure as I had when editing it.