The Year of the Lung

Introduction

The year 2010 has been designated the “Year of the Lung”, led by initiatives from the American Thoracic Society (ATS) and the Forum of International Respiratory Societies (FIRS). The public health campaign was officially launched at the 40th Union World Conference on Lung Health in Cancun, Mexico on 5 December 2009. The FIRS partners, besides the ATS, include the International Union Against Tuberculosis and Lung Disease (The Union), the Asian Pacific Society of Respirology (APSR), the Asociacion Latinoamericana de Torax (ALAT), the European Respiratory Society (ERS), the Pan African Thoracic Society (PATS), and the American College of Chest Physicians (ACCP). The main aims of the campaign are to raise public awareness about the importance of lung health, to initiate action among communities around the world, and to advocate for resources to combat lung diseases, including resources for research and research training. The campaign was convened because of recognition that the lungs have been neglected for too long in public discourse. This lack of awareness is a barrier to progress in diagnosis, treatment and care of patients suffering from lung diseases.

The scope of the problem

Hundreds of millions of people around the world suffer from respiratory diseases, many of which are treatable and/or preventable. Worldwide, respiratory diseases rank second (after cardiovascular diseases) in terms of incidence, prevalence, mortality and costs. The ‘big five’ lung disorders include lung cancer, chronic obstructive pulmonary disease (COPD), pneumonia, tuberculosis (TB) and asthma. As a diverse group of conditions, they include two disorders mainly due to smoking, two different infectious diseases and an allergic disease. The only thin thread that holds these conditions together is smoking, which is the main cause of COPD and lung cancer, predisposes patients to infections, such as TB and pneumonia, and worsens asthma. Collectively, COPD, pneumonia, TB and lung cancer are the main respiratory disease causes of death worldwide. Lung diseases, in general, cause 19% of all deaths in the world and 25% of disability-adjusted life years, and chronic respiratory diseases cause approximately 7% of all deaths worldwide and account for 4% of the global burden of disease.

According to WHO estimates (2007), 300 million people suffer from asthma, 210 million people have COPD, and countless millions have allergic rhinitis and other under-diagnosed respiratory diseases. There is a wide range of health and environmental factors that impact lung health, including TB, tobacco smoke and biomass fuel exposure, COPD, asthma, and pneumonia. All of these conditions are increasingly affecting lung health worldwide, particularly in resource poor countries, and require coordinated approaches to control. Other frightening statistics are that there is one TB-related death every 18 seconds, one HIV-related death every 16 seconds, one child death due to pneumonia every 15 seconds, and one death related to smoking every 13 seconds. Clearly, the worldwide impact of the combined epidemics of tobacco smoking, HIV infection, TB and COPD is alarming.

South Africa has not remained unscathed from the impact of respiratory diseases. Diseases of the respiratory system were, in general, the third leading group cause of death for the year 2007 overall, and the second leading cause of death in 2006. The leading cause of death in 2007 was ‘certain infectious and parasitic diseases’, which also included 597 deaths from multidrug-resistant (MDR) TB and 84 deaths due to extensively drug-resistant (XDR) TB. With regard to individual conditions, TB and influenza and pneumonia were the first and second ranked causes of death in South Africa in 2006 and 2007.

The ‘big five’ of respiratory diseases

Tuberculosis

One-third of the world’s population, some two billion people, has been infected with *Mycobacterium tuberculosis*, and TB is currently the seventh leading cause of death in the world. According to the WHO, there were 9.27 million incident cases of TB in 2007. Alarming, the WHO estimated that there were 500,000 cases of MDR-TB, of which as many as 19% (in one country) were XDR-TB. A substantial number of patients with active TB, particularly in sub-Saharan Africa, are also HIV-infected and, in these cases, TB is an important cause of death. Much still remains to be done to control TB in many parts of the world.

Lung cancer

Lung cancer is the most important cancer cause of death in the world, causing more deaths than the other three top cancer causes.
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of death, namely breast cancer, prostate cancer and colorectal cancer, combined. In certain European countries and in newly industrialising and developing countries, the incidence of and death rate from lung cancer is increasing. Tobacco smoking remains the single most important, and preventable, cause. Yet, despite extensive public health attention to the perils of smoking, significantly more still needs to be done in this area.

COPD

The primary cause of COPD is, clearly, tobacco smoking. Its prevalence is increasing in association with increasing smoking prevalence in many areas. While currently this condition is the fifth leading cause of death in the world, it is projected that, by 2020, it will become the third leading cause of death, surpassing stroke, and being one of the only chronic diseases of lifestyle that is increasing. One of the major goals of the Year of the Lung is to increase the awareness of this increasing scourge.

Pneumonia

It has been said that infectious pneumonia has been a major cause of death since our ancestors first appeared on earth, and despite more recent advances in medicine, including the development of potent antibiotics, new vaccines and even intensive care facilities with improved medical and nursing care, it still remains a significant cause of morbidity and mortality. The very young and the elderly are at most risk and, for every child who dies in a rich country, it is said that approximately 2,000 children die in poor countries. In poor countries, pneumonia kills more children than malaria, AIDS and measles combined. Importantly, many cases of pneumonia are preventable with the use of relatively inexpensive vaccines and various other initiatives, and in order to raise awareness of pneumonia in 2009, the first World Pneumonia Day was launched, which will be strengthened in 2010.

Asthma

Asthma is said to be one of the world’s most important chronic conditions, with some 300 million people said to be affected. The prevalence of asthma has been increasing in many parts of the world and the death rate varies from region to region. Despite being a difficult condition to treat in certain circumstances, it has been said that no-one should die from asthma. It is well known that asthma control, the major aim of therapy, often falls short and there are many barriers to optimal asthma control. Yet, there are excellent guidelines available to guide optimal asthma therapy, even in low and middle income countries, and the Year of the Lung provides an ideal opportunity to improve asthma care.

Conclusion

There are a number of other respiratory problems which, despite not being one of the “big 5”, are still potentially associated with significant effects. Among these is H1N1 pandemic influenza, which has been a more immediate problem, as well as the potential future threat from ‘bird flu’. Furthermore, it is widely appreciated that various environmental factors also impact on lung health, particularly among children. These include indoor and outdoor pollution, and exposure to pollen and other allergens. One of the initiatives that the ERS will be concentrating upon is the raising of awareness of the consequences of air pollution, advocating for strong and effective air quality legislation.

Much still remains to be done in the realm of lung health, but initiatives such as the Year of the Lung go a long way to placing lung conditions in their proper perspective, focusing attention on a group of conditions that has been somewhat neglected, despite their prevalence and impact, for far too long.

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