

## PREFACE

Diseases at work have a long history back to the era of Hippocrates. He admonished his followers to observe the environment to understand the origins of illnesses in their patients. With the industrial revolution, diseases at work or from environment became one of major health problems. In 1700, an Italian physician, Ramazzini published a book of *De Morbis Artificum Diatriba* describing diseases of workers, that made him be recognized as the father of occupational medicine. Since then, various diseases at work have been reported mostly in the European countries. With the spread of industries from countries to countries, relevant diseases at work also moved with industrial transfer like carbon disulfide poisoning which has moved around the world.

In 1960, Korea was an agricultural country. The proportion of agricultural industry was 57% of the household and 66% of the working population. Only 7% of the working population was working in the manufacturing industry, according to the National Statistics Office. In the year of 2005, the working population in the agricultural industry has dropped to 10% of the working population and that in the manufacturing industry has increased to 20% of the working population.

In 2008, the population of Korea was 48.6 million, ranking the 26th in the world. The economically active population was 23.7 million and wage workers were 16.1 million. Workers' compensation covered 13.5 million paid employees. The gross domestic product (GDP) was 929 billion US dollar, which ranked the 15th in the world. The gross national income (GNI) per capita was 21,530 US dollar. Korea's trade volume occupied 2.7% of the world's total, placing Korea the 12th largest trading country.

In the 1960s, coal mining industry has started for the purpose of energy supply to the manufacturing industry and a home heating source. It brought many cases of pneumoconiosis and the special law for it came into being in the middle of the 1980s. Coal mining industry has almost collapsed since the 1990s. In the 1970s, textile industry such as apparel was the main industry and heavy industries like steel, shipbuilding and chemical complex were established. In the 1980s, automobile and electronics industries have grown. In the 1990s, semi-conductor industry developed and shipbuilding, automobile and chemical industries matured to an advanced level. Since the 2000s, Korea has led the industries of mobile phones, semi-conductors, LCD panels and shipbuilding. Consequently, Korea became to be classified as an industrialized country by the World Bank.

With its industrialization, Korea has experienced most occupational diseases during the last three decades while European countries have had for more than a hundred years. Some of the occupational diseases showed a similar pattern to the developed countries, but some were different. Most acute and chronic poisonings by chemicals were similar to the previous experience in European countries, but some cancers like bladder cancer by dye, were not common in Korea because well-known carcinogenic substances have substituted to other chemicals when they were introduced to the Korean industry. In certain cases such as carbon disulfide poisoning, the disease pattern was different to the previous experience. Carbon disulfide poisoning in Korea showed more cerebrovascular problem instead of cardiovascular problem. It was probably caused by different disease patterns in two groups. Koreans had a high incidence rate of cerebrovascular diseases while Europeans had a high incidence rate of cardiovascular diseases when carbon disulfide poisoning occurred in their society.

Most of the occupational diseases were reported in the academic journals in Korea such as the Korean Journal of Occupational and Environmental Medicine, which is an official journal of the Korean Society of Occupational and Environmental Medicine, the Korean Journal of Preventive Medicine, and many other journals published by the societies of clinical medicines. However, more cases were not even reported. They were just filed in the investigation reports performed by the Occupational Safety and Health Research Institute (OSHRI), of the Korea Occupational Safety and Health Research Agency (KOSHA). The major problem is that most papers and reports were written only in Korean, which means that they are not available to international scientists who do not understand the Korean language. Thus, this special issue for occupational diseases in Korea was designed to introduce Korean experience to the world, which will be informative to countries with emerging and developing economies.

This special issue deals the occupational diseases based on what Korea has experienced during its rapid economic devel-

opment for the last three decades. Articles are written as organ-specific, according to the International Labour Organization (ILO) classification of occupational diseases. This issue covers from pneumoconiosis, which is common in the economic developing process, to stress related diseases, which are common in the advanced society, and cardiovascular and cerebrovascular diseases, which are a unique experience and phenomenon in Korea.

**Seong-Kyu Kang, M.D.**

Guest Editor

Occupational Safety and Health Research Institute (OSHRI)  
Korea Occupational Safety and Health Agency (KOSHA)