Asbestos-related Diseases in the Philippines: The Lung Center of the Philippines Asbestos Screening Program

Dina V. Diaz1,2

1Department of Physiology, College of Medicine, University of the Philippines Manila
2Department of Pulmonary Medicine, Lung Center of the Philippines

ABSTRACT

Adverse health effects from asbestos are well known and are due to the inhalation of fibers in concentrations that overwhelm the normal pulmonary defense and clearance mechanisms. Asbestos-related diseases include an interstitial lung disease termed asbestosis, pleural-based abnormalities, such as diffuse pleural thickening, pleural plaques, pleural effusions, and malignant mesothelioma. Asbestos exposure also significantly increases the risk of developing lung carcinoma. Despite the hazards borne from exposure to this mineral, asbestos is still commonly used in the developing world, putting workers at risk of developing these diseases.

The Lung Center of the Philippines’ Asbestos Screening Program (1992 to 1996) examined former workers from the Subic Naval Base in Zambales for the presence of asbestos-related disease. Out of the 1,542 screened, 58.75% demonstrated asbestos-related interstitial lung or pleural disease.

There is a need to recognize the health risks from asbestos exposure in the past which continue up to the present. Until a total asbestos ban is in place, efforts should be directed towards the elimination of asbestos-related diseases through prevention of exposures, raising awareness on health effects, establishing registries, early diagnosis, treatment and rehabilitation of those affected, and more stringent monitoring and control of asbestos use.

Key Words: asbestos-related diseases, asbestos, screening, Philippines

Case History1

An actual case from the files of the Lung Center of the Philippines (LCP) Asbestos Screening Program is that of B.C., a 57 year old mechanic, who worked for 23 years in the boiler rooms and fire rooms at the Ship Repair Facility inside the Subic Naval Base. He complained of shortness of breath on exertion of 3 years duration. He had episodes of cough with minimal whitish sputum. Work history revealed that he had been an electrician for 7 years prior to his job at the Base. He had a 25 pack-year history of cigarette smoking but quit at the age of 53. He had no previous illnesses or hospitalizations. Pertinent physical examination findings showed an elevated blood pressure, bibasilar fine end-inspiratory crackles more prominent over the left lower lung field on auscultation of the chest, and digital clubbing. His lung function test showed a restrictive ventilatory pattern with reduced diffusing capacity.

Chest x-ray (Figure 1) demonstrated abnormal interstitial opacities on both mid and lower lung fields. Based on the adequate work exposure, appropriate latency, radiographic and pulmonary function test findings, B.C. was diagnosed as a case of interstitial lung disease consistent with asbestosis.

Introduction

The word asbestos, derived from a Greek term for ‘inextinguishable’ or ‘unquenchable’, refers to a group of minerals which are crystalline-hydrated silicates that exist in a fibrous form. It is the fiber-like structure, in addition to the chemical composition of the mineral, that is the basis for its extensive commercial use. Asbestos occurs in one of two forms: serpentine and amphibole. Chrysotile is the only serpentine form of asbestos, whereas there are several forms of the amphiboles. At the present time, it appears that all adverse effects on health from asbestos exposure are due to the inhalation of fibers in concentrations that overwhelm the normal pulmonary defense and clearance mechanisms. Asbestos