

Elimination of Asbestos-Related Diseases in Turkey Still Has a Long Way to Go

Türkiye'de Asbest ile İlişkili Hastalıkların Tamamen Ortadan Kaldırılması İçin Halen Daha Katedilmesi Gereken Uzun Bir Yol Var

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Globally, an estimated 24% of the disease burden (healthy life years lost) and an estimated 23% of all deaths (premature mortality) are attributable to environmental factors [1]. Many of these can be avoided every year by reducing human exposure to “modifiable” environmental hazards by changing the used technologies and policies as well as adopting preventive and public health measures.

Asbestos refers to a family of naturally occurring minerals that readily separate into thin fibers and are found in many parts of the world. Asbestos-related diseases can occur in occupational settings; however, environmental or domestic exposure to asbestos fibers originating from local soil is responsible for a high incidence of diseases, particularly in the rural areas of Turkey. Over the last 30 years, 471,000 tons of asbestos have been imported; however, data about the effects of occupational asbestos exposure in Turkey is still lacking [2]. Turkey is one of the European countries that recently banned asbestos use [3]. Although use of asbestos is banned, asbestos-related diseases in the occupational settings are expected in the coming years because of the long latency period of asbestos-related diseases. However, environmental exposure to asbestos is believed to be the most common cause of asbestos-related diseases in Turkey, and it has been shown that there is an association between the occurrence of asbestos-related diseases and proximity of the subject's birthplace to ophiolites in an area without substantial industrial asbestos use [4]. The soil containing asbestos, commonly named as white soil, has been used by people living in rural areas for whitewash/plaster of their house and heat and water insulation of the roofs and furnaces. In addition, asbestos fibers flow in the air, e.g., because of peeling of the plaster or blowing of wind containing contaminated soil.

Compared with the general population, asbestos-related diseases have been found to have higher incidence rates among the population that has been exposed to asbestos [5-7]. In this supplement to the *Turkish Thoracic Journal*, Metintaş et al. provide the results of the “**Turkey Asbestos Control Strategic Plan.**” This plan aimed to determine the characteristics and prevalence of asbestos exposure in rural areas, which are the most common source of asbestos-related diseases in Turkey, and to develop a rehabilitation implementation program to eliminate the exposure.

The plan was initiated in 2012 under the leadership of Metintaş, the director of Eskişehir Osmangazi University Lung and Pleural Cancers Research Center (ESOGU-APGAM), and the Turkish Mesothelioma Working Group with the support of the Public Health Institution of Turkey. First, patients with mesothelioma were identified from the hospital records using the code C45 in 30 provinces where mesothelioma was diagnosed between 2008 and 2012; thereafter, the villages were investigated for possible asbestos exposure. If a person was born in a village that had asbestos exposure, the exposure was considered to be environmental; otherwise, the exposure was considered to be probably occupational.

According to the findings of the report, 5,617 patients (57.7% males and 42.3% females; mean age: 62 years) were diagnosed with mesothelioma between 2008 and 2012 in the 30 provinces. In June 2014, 3,445 of those patients (62.2%) were determined to have died. The mortality rate among men was higher than that among women (64.7% versus 58.8%, $p < 0.001$). The mean survival period following diagnosis was 11.4 ± 0.2 months. The most common provinces of birth among the patients evaluated were Diyarbakır, Elazığ, and Eskişehir. While the cases occurred mostly in rural areas, there was male dominance in the urban areas, suggesting a possible occupational exposure. Out of 1251 soil samples, 514 samples from 379 villages included asbestos fibers such as chrysotile, tremolite, or both. The total population of those



379 villages was 158,068 in 2013. Eleven provinces (Diyarbakır, Tokat, Kütahya, Sivas, Konya, Yozgat, Eskişehir, Muğla, Malatya, Çorum, and Elazığ) had at least 5000 exposed people each. Because exposure to asbestos is still ongoing, the people living in these cities continue to be at risk of asbestos-related diseases.

Furthermore, asbestos exposure was determined in nearly 2000 examined specimens collected from houses or outdoor sources. Therefore, rehabilitation and elimination of these sources should be achieved within 2–3 months and at a very low cost. The proposed methods for elimination of asbestosis do not include abolishing or moving villages but rather covering the walls plastered or whitewashed with asbestosis with a thick latex paint and covering the roofs that include asbestos with a plastic material. The authors also recommend making the grounds arable, planting trees or bushes, or encircling the mound with a fence to prevent entrance, as well as demolishing abandoned houses, covering roadsides, and asphaltting roads.

It is believed that a total of 3,833 cancer cases, including 2511 mesothelioma and 1322 lung cancer cases as well as 17,344 pleural plaque, 12,523 diffuse pleural fibrosis, 482 asbestosis, and 1070 respiratory insufficiency cases will be prevented by this plan [2]. Many lives will be saved, and the direct and indirect costs of cancer cases will decrease. Although this is one of the most important “public health”

projects and the data provided by Metintaş et al. [2] is critical in the prevention of asbestos-related disorders, this project is by no means sufficient. However, it is a clear reminder that the battle against asbestos-related diseases still has a long way to go.

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DÜZELTME

Sibel Atış Naycı ve ark. tarafından hazırlanan ve dergimizin Nisan 2015 sayısında yayınlanan “Kronik Obstrüktif Akciğer Hastalığı 2014 Güncellemeleri” (*Turk Thorac J* 2015; 16: 86-96) başlıklı yazının hazırlık aşamasında makalenin yazarlarından Şermin Börekçi teknik bir hata nedeniyle yazar listesi dışında bırakılmıştır. Yazarlar tarafından dergi editörlüğüne iletilen yazılı talep sonrasında söz konusu hata tespit edilmiş ve makalenin yazar listesinin aşağıdaki şekilde düzenlenmesi dergi yayın kurulu tarafından onaylanmıştır

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