Editorial

Are Mesothelioma Patients in Thailand Background Cases ?

Somsak Tiamkao[1], Somchai Bovornkitti[2]

[1]Divising of Neurology, Department of Medicine, Faculty of Medicine, Khon Kaen University, Khon Kaen

[2]The Academy of Science, The Royal Society of Thailand

Mesothelioma is almost exclusively a cancer of the pleura or peritoneum among other organs with mesothelium lining. Such tumors have been referred to as sentinel disease for asbestos exposure. Most mesothelioma cases are background cases, i.e. a consequence of spontaneous tumor formation.[1]

Historically, most mesotheliomas were once exclusively referred to as asbestos-related disease; the disease was considered an epidemiologic marker for asbestos. Nowadays, however, that view is considered a misinterpretation, meaning that the only risk factor for mesothelioma is asbestos. In addition to a few risk factors other than asbestos, most mesothelioma cases are a consequence of spontaneous tumor formation. Bertram Price's report[1] projected that around the year 2040 virtually all mesothelioma cases in the United States, currently estimated to be approximately 1,600 per year, will be background cases.

Of note: in Thailand, two articles[2,3] reported the results of several hundred routine autopsies in two university hospitals, performed 34 years apart; they showed asbestos bodies in the lungs of non-asbestos patients. The findings of both studies implied that Thai people at large were being exposed to increasing amounts of asbestos fibers floating in the ambient atmosphere.[4] The pollutants were likely to be released from the earth as well as by the scaling of asbestos fibers from fiber concrete roof tiles and fiberboard siding of aging houses, especially following stormy weather. The studies did not claim that such exposure had led to the death of those who had been exposed to asbestos bodies in their lungs in contrast to the general belief that exposure to even a small amount of asbestos would readily cause asbestos-related diseases. The phenomenon has been

explained by the fact that Asians are less likely to develop asbestos-related diseases perhaps because they lack susceptibility genes needed for the development of asbestos-related conditions.[5-7] Another explanation may be that the long incubation period of mesothelioma may not cause disease during an exposed person's lifetime.[8]

References

1. Price B. Projection of future numbers of mesothelioma cases in the US and the increasing prevalence of background cases: an update based on SEER data for 1975 through 2018. Critical Reviews in Toxicology 2022;52:317-24.
2. Sri-umpai S, Bovornkitti S, Pacharee P. Asbestos bodies in randomised autopsied lungs in Thailand. J Med Assoc Thai 1985;68:174-82.
3. Incharoen P, Hama T, Arsa L, Kamprerasart K, Womgwichai S, Bovornkitti S. Asbestos bodies burden in the autopsy lung tissue from general Thai population. The Open Respiratory Med J 2019;13:5-10.
4. Bovornkitti S. Asbestos and mesothelioma in Thailand. Ukranian J Occup Hlth 2012;suppl.:29-33.
5. Bovormkitti S, Pitukpakorn M. Asbestos-related diseases in Thailand: Past experiences: Current and future perspectives. Thamasart Med J 2019;19: 215-9.
6. Bovornkitti S. Susceptibility factors in the genesis of mesothelioma. Bhudhachinaraj Med J 2016;33:255-7.
7. Bovornkitti S. Asbestos in ASEAN countries. Bhudhachinaraj Med J 2016; 33:385-9.
8. Arunsrimorakot S. Health impacts of asbestos air pollution. Presented at the Forum on Air Pollution and Health Impacts held by the Academy of Science, The Royal Society of Thailand, October 31, 2019. P. 52.