

## DIFFICULTIES IN THE DIAGNOSIS OF ASBESTOSIS IN INDIA

DR. V. MURLIDHAR



*Dr. V. Murlidhar* Founder Member, Occupational Health and Safety Centre, Mumbai (OHSC estd: 1988); currently, Medical Officer, United Nations Assistance Mission in Iraq (UNAMI); email: murlidharv@gmail.com

In developing countries, there are many obstacles to the recognition of asbestosis as an occupational disease and to the translation of such recognition into realized rights to treatment or compensation. My experience is based on 18 years of work as a physician and activist with the Occupational Health and Safety Centre (OHSC), Mumbai and also my involvement with asbestos workers of the Hindustan Composites Factory in Mumbai.

#### Scientific Uncertainty and Political Expediency

Like many chronic occupational diseases asbestosis exists in a climate of uncertainty, concerning exposure controls, diagnoses and assessment of disability. Exposure limits and disability assessments are often influenced by socio-political factors, while reliable diagnoses depend on access to suitable diagnostic tools and appropriate training of clinicians. There is frequently uncertainty about the precise source of asbestos exposure, and about the nature and speed of the disease processes – despite the public perception that medicine is an exact science. This uncertainty is compounded by the lack of a clear regulatory framework and the lack of understanding among concerned parties about the limited legal regulations. I will elaborate on some of these issues.

The differences among various countries in the threshold limit values (TLVs) for dust levels that are considered safe in the workplace indicate that assigning them is not an exact science. But are these levels based on science at all? The fact that poorer countries generally have higher TLVs implies that political factors are involved – not that people in poorer countries are more resistant to the development of asbestosis or asbestos-related cancer. Also, these standards tend to change with time depending on the dialectics between industry and activists seeking to improve workers' welfare.

#### Disability Assessment

The assessment of disability for occupational lung diseases including asbestosis using the standard Impairment Assessment Guidelines is rather arbitrary. While the guidelines prescribe some spirometry values (FEVs and FVCs) they also relate levels of disability to vague descriptions of breathlessness (dyspnoea):

- ◆ Up to 25% – dyspnoea, when it occurs, is consistent with the circumstances of activity.  
(FEV1 >80% and FVC >80% and FEV1/FVC  $\times$ 100 >75%, of predicted values)
- ◆ 26-50% – dyspnoea does not occur at rest and seldom occurs during the performance of the usual activities of daily living. The patient can keep pace with persons of same age and body build on the level without breathlessness but not on hills or stairs.  
(FEV1 60-79% or FVC 60-79% or FEV1/FVC  $\times$ 100 60-74%, of predicted values)

- ◆ 51-75% – dyspnoea does not occur at rest but does occur during the usual activities of daily living. However, the patient can walk a mile at his own pace without dyspnoea although he cannot keep pace on the level with others of the same age and body build.  
(FEV1 51-59% or FVC 51-59% or FEV1/FVC  $\times$ 100 41-59%, of predicted values)
- ◆ 76-100% – dyspnoea occurs during such activities as climbing one flight of stairs or walking 100 yards on the level, on less exertion, or even at rest.  
(FEV1 <50% or FVC <50% or FEV1/FVC  $\times$ 100 <40%, of predicted values)

Here, FEV<sub>1</sub> is the volume of air that can be forcibly exhaled in one second while FCV is the total volume that can be forcibly exhaled.

Of key importance in the use of such guidelines, especially in legal claims, is the aura of scientific legitimacy surrounding the procedure. Despite the reality that there is very little scientific rigor in the assessment of disability, the popular perception is just the opposite.

#### Diagnosis

Asbestosis is diagnosed if a worker has an occupational history of asbestos exposure extending over at least 15 years and radiological findings typical for asbestosis are found. Clinical examinations are not required for diagnostic purposes, but have a role in determining treatment options. Pulmonary function testing, as indicated above, is used for impairment assessment, rather than diagnosis.

While a chest X-ray that clearly shows the characteristic signs of asbestosis requires no further imaging procedures for a positive diagnosis, a high resolution CT (HRCT) may pick up more cases, since earlier stages of the disease may be identified. However, financial constraints limit the physician's use of HRCT in India.

It is important to clearly distinguish asbestosis from tuberculosis (TB); asbestosis in India has been misreported as TB in the past. Though the classical finding for asbestosis is a restrictive impairment in lung function, one third of the cases may have an additional obstructive element.

Of course, asbestos exposure can also lead to lung cancer and mesothelioma. However, whereas early stages of asbestosis may be revealed by HRCT, the development of asbestos-related cancer is an extremely complex process, and at present there is no way to predict which chromosomal damages caused by asbestos will lead to malignant disease within the lifetime of an exposed individual. By the time symptoms appear it is generally too late for medical intervention. The best hope for those already carrying asbestos-damaged cells lies in a better understanding of the processes underlying all malignancies. For the present, responsible governments should at least curtail all further exposure to asbestos by imposing comprehensive bans.

## Performance of Medical Professionals

In India, there are major hurdles that obstruct the process of recognizing occupationally caused conditions like asbestosis and claiming compensation for occupational injury. Unfortunately, "Occupational Health" is taught as part of the much-maligned subject of Community Medicine, and students rarely have access to standard ILO radiological plates, mandatory for asbestosis diagnosis, even in the top medical colleges. This, in addition to the fact that there is no postgraduate degree in occupational health available at any of the major medical colleges, probably explains why doctors are so poorly trained in the recognition and diagnosis of occupational diseases – particularly pneumoconiosis (the group of diseases to which asbestosis belongs). Consequently, even a first-ranking radiology physician, lacking the expertise to diagnose asbestosis unambiguously, may be compelled to certify an X-ray as normal when it is not.

Although the ILO standard plates are expensive and difficult to procure they are available to students in some institutes, like the Central Labour Institute (CLI), that offer diplomas in occupational health. But, the candidates chosen to attend such courses are mainly industry-appointed doctors who learn about the diagnosis of lung diseases in order to arm themselves – so that they can better argue against genuine asbestosis claims.

Though any registered medical practitioner in India is legally eligible to diagnose occupational diseases, many believe that it requires a specialist to diagnose asbestosis. The asbestos industry allows this misconception to persist – it is to their advantage to restrict widespread reporting of this disease.

The attitude of doctors and other professionals involved in diagnosing asbestosis is also influenced by a bias among the professional class against blue-collar workers in general. At times, this has led to professionals deliberately misguiding workers who came to them with occupational and environmental health problems related to asbestos. Senior medical practitioners are employed by the industry to give evidence against asbestosis claimants; the fact that many knowingly give false testimony is totally unethical.

## Unethical Research

When a study is carried out on a cohort of workers, the findings are not made available to anyone except the select few conducting the study, and so are not open to public scrutiny. Many studies on occupational diseases, including asbestosis, are carried out by students from the top medical colleges and also by institutes like the Central Labour Institute and the National Institute of Occupational Health (NIOH), the premier institute of occupational health in India. These studies help students to obtain their diplomas or enhance their CVs, but the results are not made accessible to their medical colleagues let alone any workers found to be suffering from asbestos-related disease. On being questioned as to why they do not inform such workers of their findings, they offer the argument that, in epidemiological research individual cases are of lesser importance than the whole – or that the results may be given to the relevant authorities, which means a sponsoring industry on many occasions. In fact the only place data obtained in these studies is likely to appear is at occupational health conferences in five-star hotels, sponsored by industry.

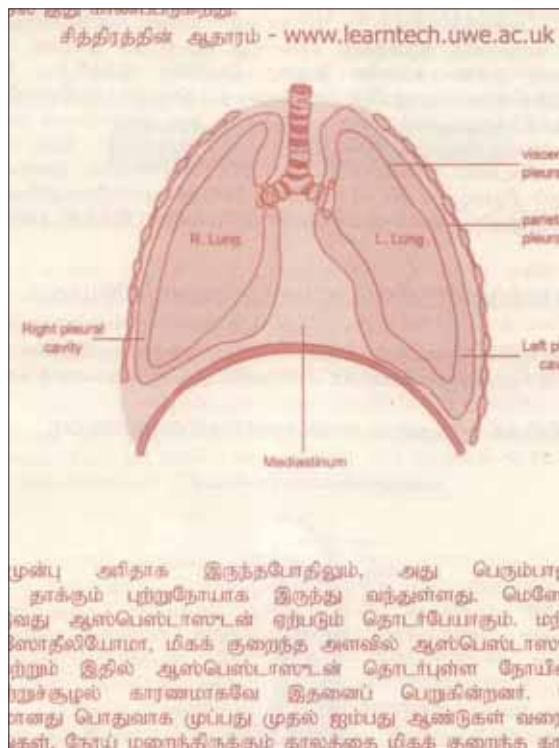
These practices have created a situation in which, even though there has been a great deal of data collected in India relating to occupational disease, hardly any data on occupational disease have been made available to the general medical community. This has led to the projection of India as a country with low levels of occupational disease and thereby with a healthy working environment. A common occupational disease like noise-induced hearing loss was officially recognized only in 1998, when the Occupational Health and Safety Centre (OHSC), Mumbai published its findings after a long struggle. It is obvious that the occupational diseases diagnosed in India are just the tip of an iceberg.

Should an occupational disease related to asbestos be identified, workers face further problems in gaining medical or disability certification. Neither is given readily, while disability certification, which is required for compensation, is frequently not understood by doctors and hence not given to workers. Lawyers, even those whose general stance is pro-worker, tend to have a poor knowledge of progressive laws related to occupational health.

## Workers' Movement Setbacks, Apathy and Red Tape

There have been several serious setbacks to workers in the past two decades. The failed textile strikes of the 1980s were followed by the rapid closure of factories and sacking of workers in major industrial belts like the Thane-Belapur region near Mumbai – due to the onslaught of the new economic policy pushed by governments, amidst forces of economic globalization, liberalization and privatization.

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The factories were relocated to new areas in the interior of India where the workers could be employed on a contract basis without social security cover and union representation. Among those so treated were asbestos workers; however, in this group, those who were too weak to work due to asbestos-related diseases, took voluntary retirement, were sacked or died due to cancer or lung failure. This has given rise to the “healthy worker” effect that has distorted health statistics, invalidating the results of even new studies.

Poor training, as well as undermanning and general apathy, characterized the staff of the Employees’ State Insurance (ESI) scheme – a contributory health insurance scheme with large financial reserves. Consequently, ESI has been ineffective in supporting workers faced with occupa-

tional health problems. With little help from official bodies, workers have been confronted by information issues, including difficult access to the Internet owing to a shortage of resources, and the fact that all information tends to be in English (with some Latin and Greek). This has created serious difficulties for workers trying to obtain information on scientific, legal or insurance matters. These factors, as well as Kafkaesque “red tape-ism” (procedural delays), have daunted even the bravest of workers – armed with medical certification forms – seeking justice.

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