

ASBESTOS

By I. J. Selikoff

I DO NOT KNOW if it is entirely appropriate to consider our current problems with asbestos an "unanticipated environmental hazard." As I look back, it would seem that we should have had some premonition.

For example, 70 years ago H. Montague Murray, then Senior Physician at the Charing Cross Hospital in London, examined a man of 33 suffering with pulmonary fibrosis. He had been working in the carding room of an asbestos textile factory. Of the ten men working in that room thirteen years before, he was the sole survivor. He, too, died a year later; at post mortem it was found that he had severely scarred lungs containing numerous asbestos fibers. Dr. Murray described this case to the Departmental Committee on Compensation for Industrial Disease which, after thanking Dr. Murray, noted that "... considerable trouble is now [in 1907] taken to prevent the inhalation of the dust, so that the disease is not so likely to occur as heretofore."

The disease which was referred to then had no name, nor did it when Auribault described numerous deaths among French workers in an asbestos textile factory in 1906, nor did it when Pancoast found abnormal X-rays of the chest in 1919 in a group of American asbestos workers. Surely, taxonomy has a particular virtue in science; individuals dying of this non-disease became much more evident when Cooke described another case in 1924 and 1927 and gave the illness its current name—*asbestosis*. We can now accurately record, for example, that ten percent of the deaths among asbestos insulation workers in New York in the past 25 years were due to *asbestosis*.

The new category was soon replete with cases.

However, comfort was provided, this time in the Home Office Report put before the English Parliament in 1930. While pulmonary disease among asbestos workers in the past was acknowledged, it was simultaneously concluded that the outlook was good. "In the space of a decade, or thereabouts, the effect of energetic application of preventive measures should be apparent in a great reduction in the incidence of fibrosis."

Such optimism persisted for the next 30 years; *asbestosis* was acknowledged as a rather rare disease, occasionally occurring among a small group of workmen employed in an isolated, esoteric industry.

There were a few rumblings during this time whose echoes should perhaps embarrass us now. Thus, Kenneth Lynch reported a death from lung cancer in association with *asbestosis* in 1935, and several similar reports of this association between two then uncommon diseases followed. For the most part, however, these reports were categorized as bibliographical curiosities. Even the careful studies of Richard Doll reported in 1955 failed to disturb our calm, perhaps because of the reticence with which the statistician summarized his findings. Listing eighteen deaths due to lung cancer in 105 consecutive post mortem examinations at one asbestos works in England, he concluded that "... lung cancer was a specific industrial hazard of certain asbestos workers..." Even those who accepted Doll's conclusions—and there were some who did not—could point to a problem with a rather narrow spectrum. A single neoplasm (lung cancer) was (past tense) a specific industrial hazard (no hint that it could be more than this) of certain asbestos workers (the heavily exposed individuals in this factory).