

Doll concluded that lung cancer was a specific industrial hazard of certain asbestos workers and that, after 20 years of exposure, the risk is 10 times as great as for the general population.

This article is important for several reasons, in addition to the definite conclusions at which it arrives. For example, it begins by stating that "in view of the infrequency of asbestosis, this large number of cases (61 cases of lung cancer) suggests—but does not prove—that lung cancer is an occupational hazard of asbestos workers." Neither this article nor any previous one which we have examined presents any figures to prove that asbestosis is an infrequent occurrence. Estimates of the number of persons potentially exposed to asbestos dust in the United States alone vary from 10,000 to 35,000, and the incidence of asbestosis of any degree might be higher than Doll imagines.

This study, like so many others, involves autopsy records. The number of persons involved in the statistical analysis is only 113, representing only 1,042.25 man-years of life. It is also true that in selecting men who had been employed for at least 20 years, the study automatically excluded those who died from other causes after shorter employment.

Another reason why this publication is of importance is a statement which it contains to the effect that "the strongest evidence that is (lung cancer) may be a hazard (in asbestos workers) has been produced by Merewether and by Gloyne."

In 1951 Gloyne¹¹ presented a review of 1205 autopsies on persons who had worked in various dusty occupations. This number included 132 asbestos workers, of whom 121 showed "pneumoconiosis"—presumably asbestosis. Primary cancer of the lung occurred 17 times in this group, an incidence rate of 14.1% for lung cancer among asbestosis cases coming to autopsy. There were in his series 796 cases with silicosis and 6.9% of these also showed primary cancer of the lung. The incidence of

lung cancer in other forms of pneumoconiosis was 6.7%, and in 169 cases which proved not to have any type of pneumoconiosis it was 8.3%. Gloyne considered "the mortality of the asbestos workers" to be "disturbing." First of all, it is obvious that the paper does not deal with the "mortality of asbestos workers," and secondly, it must be borne in mind that all of Dr. Gloyne's cases were submitted to him for study because the findings were unusual for uncomplicated pneumoconiosis. It can reasonably be assumed that cases, including those of asbestosis, in which the findings were not considered unusual were not sent to Dr. Gloyne for examination. As a matter of fact, in the same paragraph in which he expresses concern over the incidence rate in asbestosis, Dr. Gloyne himself points out that the rate for lung cancer based on necropsies at the London Chest Hospital was 21.3% while the figures of the Registrar-General showed only 2.4%. He thus recognized that autopsies on a certain selected group of cases were not representative of the general population. It would seem, then, that notwithstanding the value of Dr. Gloyne's work, its importance as an index of the prevalence of lung cancer in asbestotics has been misinterpreted by some who have quoted him. All that it really shows is the fact that in a group of 121 cases, selected for special study primarily because they seemed abnormal by preliminary examination, 17, or 14.1%, had lung cancer.

Merewether¹² in 1947, in the report of the Chief Inspector of Factories, reviewed all cases reported between 1924 and 1946 in which asbestosis was the cause of death or a coexisting condition. This work was later extended to include all such cases reported up to December, 1954, by which time there were 344 deaths, including 205 males and 139 females. Among them were 55 cases (16%) of cancer of the lung, 41 in males and 14 in females. It is quite possible that a large number of asbestotics who did not die of their asbestosis, or in whose

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