

Editorial Comment

This case presentation excellently illustrates many aspects of the relationship of asbestosis to pulmonary carcinoma. An especially pertinent statement is made in reference to clinical history of previous exposure to asbestos, and well worth repeating "but instances of the disease occur with increasing frequency in which the circumstances of exposure are not known to the physicians or even the patients." Perhaps a positive history of exposure would be obtained more often if the questioner, who is trying to obtain a previous history of exposure to asbestos, was more fully aware of the various industrial processes or products in which a worker might be exposed to asbestos fibers. Asbestos fibers consist of silicate minerals often referred to as amphiboles. Ten percent of the mined rock consists of these mineral fibers which contain complex silicates. The best known sources are located in Canada (about three fourths of the world supply), Rhodesia, South Africa, and the USSR. The complex mineral fibers are removed from the powder and then the long fibers are separated from the short ones. It is during these processes that the most dangerous exposure occurs. The long fibers are used for the manufacture of asbestos cloth and gaskets, while the short ones are used for paper, heat resistant boards, filter pads, and brake blocks and linings, and are increasingly found in plastics. Each year new uses for these fibers are constantly being developed. In the currently reported case, the only occupational history is that the individual had been a pipe fitter. It is conceivable that part of his work was concerned with the use of asbestos-containing coverings for these pipes. This might have been the possible source of exposure in that it may have been necessary for him to saw through this asbestos material and thus produce a certain amount of asbestosis-containing dust.

In this case, the carcinoma was of the squamous type. There seems to be a difference of opinion as to the most prevalent histologic type of carcinoma that is found in association with asbestosis. In this report, it is stated that squamous cell carcinoma is the usual form, whereas Spencer¹ states that adenocarcinoma is the most frequent form. It has become increasingly apparent that pulmonary cancers arising in scars are more frequent than was formerly believed. These are generally adenocarcinomas. Whether or not some substance or substances, as for instance the iron in the asbestosis body, is specifically carcinogenic or whether carcinoma arises because of the nonspecific alterations produced by the asbestos remains to be determined. With the squamous cell carcinoma, it is conceivable that the squamous metaplasia, the bronchiectasis, and the fibrosis caused by the asbestos fibers might impair the lung's ability to effectively rid itself of other carcinogens, and by this process enhance the development of carcinoma. In particular, it would be important to note what proportion of individuals with asbestosis and pulmonary carcinoma were cigarette smokers. At any rate, the incidence of pulmonary carcinoma in individuals with asbestosis in various reports has ranged from 13%-20%. Statistically, this is a highly significant relationship.

Of more immediate interest are the cases of mesothelioma of the pleura that occur in individuals with asbestosis. In a most recent report² from Liverpool, England, evidence of exposure to asbestos was noted in 14 of 16 consecutive cases of pleural mesothelioma. Asbestosis bodies were present in lung tissue in ten of these cases. In another study on two patients with mesothelioma, one individual had not been in contact with asbestos for 20 years and in the other case the exposure had been only intermittent and slight. In all individuals with mesothelioma careful search should now be made for asbestosis bodies and fibers in the lung and tumor tissue. It