

ASBESTOSIS

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ASBESTOSIS and CARCINOMA OF THE LARYNX
A POSSIBLE ASSOCIATION

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Asbestosis and Carcinoma of the Larynx

A Possible Association

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• Three patients had carcinoma of the larynx, history of asbestos exposure, and evidence of intrathoracic changes characteristic of asbestosis. The data suggest an association between asbestosis and carcinoma of the larynx.

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INCREASED incidence of various malignant neoplasms has been related to exposure to asbestos. The association between asbestosis and pulmonary and pleural neoplasms has been well established. We have recently seen three patients with primary laryngeal cancers, a history of asbestos exposure, and intrathoracic changes consistent with asbestosis. In this communication we briefly detail our cases to alert our colleagues to this possible association.

Report of Cases

CASE 1.—A 65-year-old man, with asbestosis (Fig 1) had been employed for 26 years as an insulator in a naval yard. He had smoked one pack of cigarettes per day for many years, stopping three years before admission. Progressive dyspnea, wheezing, and hoarseness prompted him to seek medical attention. On Nov 29, 1971, bronchoscopy performed in conjunction with biopsy disclosed epidermoid carcinoma of the anterior commissure and right vocal cord. A total laryngectomy with radical neck dissection was performed, and postoperative radiation therapy was given from Dec 7, 1971, through Jan 27, 1972, for a total of 6,600 rads. He currently has no complaints.

CASE 2.—The patient was a 54-year-old man who had installed wiring in the cargo

area of ships from 1952 to 1954. He had smoked one pack of cigarettes per day for 30 years. A chest roentgenogram demonstrated changes consistent with asbestosis (Fig 2). Laryngoscopy was performed in

January 1973 for increasing hoarseness of 1½ years' duration. Biopsy of several irregular growths on the left vocal cord revealed intermediate grade epidermoid carcinoma. A total of 6,400 rads was given from Jan 18, 1973, through March 5, 1973. He is well and asymptomatic eight months after therapy.

CASE 3.—The patient, a 60-year-old man, had been a steam pipe fitter and welder for 30 years. He had smoked two packs of cigarettes per day for 24 years, stopping 18

Fig 1.—Posteroanterior roentgenogram of chest of patient 1, showing marked pleural thickening and extensive bibasilar interstitial fibrosis. Changes are typical of asbestosis.



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Fig 2.—Posteroanterior roentgenogram of chest of patient 2. Pleural thickening is present at lower lateral pleural surfaces (double arrows). Pleural calcification is seen at left hemidiaphragm (single arrow).

Fig 3.—Posteroanterior roentgenogram of chest of patient 3. Pleural thickening (double arrows) is present at lower lateral pleural surfaces. Calcification of both diaphragmatic pleurae is seen (single arrow).



years ago. Investigation of gradually increasing hoarseness prompted laryngoscopy and biopsy of the right vocal cord, which showed moderately well-differentiated epidermoid carcinoma. A chest roentgenogram at that time demonstrated changes consistent with asbestosis (Fig 3). Radiation therapy to the larynx over a seven-week interval totaled 6,580 rads. He is well 15 months after therapy.

Comment

Selikoff and co-workers¹ investigated 632 asbestos workers in the New York-New Jersey area who had been exposed before 1942. Since their study was done in 1964, a 20-year period was ensured between time of exposure and the study. Of 255 deaths, 45 were from pulmonary carcinoma, three from pleural mesothelioma, one from peritoneal mesothelioma, and 29 from gastrointestinal cancers. Vigliani and co-workers² in a report in 1965 of pulmonary malignant neoplasms associated with asbestosis reported one case of carcinoma of the larynx. Of the 19 respiratory tract malignant neoplasms reported, 15 were of the lung and three of the pleura.

Stell and McGill³ in a recent report (1973) of 100 patients with carcinoma of the head and neck, noted 59 cases of carcinoma of the larynx, 17 of whom had a history of asbestos exposure. No mention was made of evidence of intrathoracic manifestations of asbestosis.

It is difficult to ascertain the precise causative role, if any, of asbestosis as a factor in laryngeal carcinoma in our patients. All three patients in this report smoked cigarettes heavily. The possibility of a synergistic effect of both cigarette smoking and asbestos exposure is entertained.

The possibility of an association between carcinoma of the larynx and asbestosis is suspected. We would appreciate receiving comments and additional case material, or would share our case material, to further document this possible association.

References

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