

SUMMARY

Two methods of measuring the resistance or sensitivity of *Staph. pyogenes* to mercury salts have been compared. Little difference was noted, but the agar plate method is preferred as it is technically easier to perform. Resistance to mercury appears to be associated with antibiotic resistance, but no difference in virulence between the two groups was demonstrated by means of intracerebral injection of mice. The mercury test may have a place as a screening procedure in view of the relationship between the resistance to mercury and to antibiotics.

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SPECIAL REPORT

Asbestos and Cancer

The Report and Recommendations of a Working Group Convened Under the Auspices of the Geographical Pathology Committee of the International Union Against Cancer

EDITOR'S NOTE—In October 1964, the New York Academy of Sciences sponsored an international meeting on the biological effects of asbestos. Following this meeting, some 40 delegates from Australia, Canada, Finland, France, Germany, Great Britain and Ireland, Italy, South Africa and the United States were invited to study the vast amount of information which had been presented with a view to the organization of an international study of asbestos and cancer. The terms of reference of this Working Group covered three major aspects of the problem: epidemiology, pathology and experimental pathology, and physics and chemistry.

The findings of the Working Group and their recommendations arising from these studies are recorded, in slightly abridged form, in the following report.

THE ASSOCIATION OF EXPOSURE TO ASBESTOS DUST AND CANCER

THE main types of asbestos of commercial interest are amosite, anthophyllite, chrysotile, crocidolite and tremolite. There is evidence of an association between exposure to asbestos and malignant neoplasia. This has been established mainly on information from Germany, Italy, South Africa, the United Kingdom and the United States of America.

The types of tumours which have been shown to be associated with exposure to asbestos dust are:

1. Carcinoma of the lung.
2. Diffuse mesothelioma of the pleura and peritoneum.

There is some suggestion of an association also with gastrointestinal carcinoma, and possibly with ovarian tumours.

The latent period between first exposure to the dust and detection of the related tumours is many years, usually 20 or more. Instances up to 60 years have been reported. For this reason, further cases of these associated tumours will be expected to occur for many years to come, even if dust exposures are now greatly reduced.

Present evidence indicates that the associated carcinomas of the lung are not limited to exposure to any one type of asbestos fibre. However, further investigations are urgently needed to establish whether the degree of risk is importantly related to the type of fibre inhaled.

In the case of mesotheliomas evidence from several countries suggests that exposure to crocidolite (blue fibre) may be of particular importance, but it cannot be concluded that only this type of fibre is concerned with these tumours, and further investigation of this problem is needed.

Certain types of asbestos fibres in the virgin state have been found to contain oils, waxes and other organic matter. In addition, asbestos fibres readily absorb hydrocarbons subsequent to mining. Small or trace amounts of various elements such as nickel and chromium are also found associated with some types of fibre. The possible role of such associated materials in the development of tumours, following exposure to asbestos dust, is not yet clear.

These findings, when considered in relation to the great increase in the use of asbestos for many purposes in all countries, suggest that a more serious and widespread hazard from exposure to asbestos dust may exist than is widely appreciated.