

Asb 03

ZUR EPIDEMIOLOGIE ASBESTFASERSTAUBVERURSACHTER TUMOREN
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In 1972, a procedure for the special occupational health service for employees exposed to asbestos dust was introduced by the Industrial Injuries Insurance Institutes (Berufsgenossenschaften) of the Federal Republic of Germany. Since January 1, 1972, occupational health examinations are performed even after terminating an asbestos dust exposure of at least 3 years duration.

At January 1, 1977, a prospective cohort study was started with employees, who were formerly exposed to asbestos dust in several production and user industries.

Data of these persons are collected in the Central Register of Employees exposed to Asbestos dust of the Industrial Injuries Insurance Institutes. 3.070 male and female employees, which had terminated their asbestos exposure after January 1, 1972, have been enrolled in the study as subcohort I. In comparison, 665 persons, finishing their exposure before January 1, 1972, serve as subcohort II. Besides several other enrollment criteria, the individual's permission was required to evaluate its personal data.

Tumours as cause of death were more frequent than it is expected in the general population. Additional to a high incidence of mesothelioma, the SMR is increased especially for lung cancer.

The results, especially in subcohort II, seem to be comparable to the international epidemiological mortality experience.

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Asb 04

EARLY DIAGNOSIS OF LUNG CANCER BY SPUTUM CYTOLOGY AND
DNA-IMAGE-CYTOMETRY
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Bronchial carcinoma can be diagnosed non invasively and cheap by cytological investigation of three sputum samples in any stage. Our overall diagnostic sensitivity investigating about 800 patients with 130 lung cancers amounted to 85%, the specificity to 100%. The accuracy of the histogenetical tumor typing was 100% for small cell carcinoma, 85% for squamous cell carcinoma and 80% for adenocarcinoma. Some radiologically occult bronchial carcinomas could be localized bronchoscopically by differential brushing. Radiologically and bronchoscopically occult, sputum cytologically positive cases presented problems in further clinical management.

Cases of dysplasias in metaplastic squamous epithelia in sputum specimens were subjected to Rapid DNA-Image-Cytometry with an automated microscope and a TV image analysis system. A diagnosis was established according to an algorithm for a DNA-cytophotometric diagnosis of malignancy. The correct diagnoses of prospective malignancy could thus be established in 17 cases in a stage in which cytology was not yet able to present a definite diagnosis of malignancy. The period between the DNA-diagnosis of malignancy in dysplasias and the morphological evidence of cancer was up to half a year. All cytophotometrically negative cases proved to be benign in the clinical follow up with one exception (Auffermann and Böcking, 1985).

Thus sputum cytology combined with diagnostic DNA-image-cytometry seems to be a sufficiently sensitive, specific, cheap and non invasive diagnostic procedure for the early detection of bronchial carcinomas especially in high risk groups like smokers and asbestos workers. The procedure seems to be suitable for automation and mass screening.

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Asb 05

THERAPY OF MESOTHELIOMA FROM ASBESTOS EXPOSURE
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Since the causative role of asbestos became established only minor advances in the treatment of mesothelioma have been presented. Very few authenticated cases with long-term survival, usually following extended pleuro-pneumectomy, have been reported. Few long-term survivors can also be found without any therapy. Debulking parietal pleurectomy is often favoured when radical operation is not possible. Prolongation of life has not been established yet, although it may give palliation and be of value for recurring exudate. This can also be controlled in 50% by simple chemical pleurodesis. Chemotherapy (esp. adriamycin) has been associated with some prolonged survival. Accumulated data show a tumor regression in 10(-15%) of pleural and 15% in peritoneal cases. Ongoing studies with combined chemotherapy (e.g. adriamycin+mitomycin C / cis-platin+mitomycin C) show a 20% response rate so far. External-beam radiotherapy can produce some objective tumor regression and may be of value in palliation of localized pain and for extruding tumor. Without pneumectomy even most sophisticated irradiation fields regularly produce severe lung damage. The interstitial use of high-energy radioactive compounds may be of some benefit as an adjunct to parietal debulking pleurectomy. Intracavitary cis-platin has some effect in peritoneal mesothelioma only. More palliation has been reported from combination of surgery, chemotherapy, and radiation. Results remain still difficult to evaluate. In Hamburg a randomized controlled trial (n=135) showed a prolongation of median survival of 6 mo. in favour of combined treatment, no benefit of operation, and an 15% response (PR) to chemotherapy. Hämatologische Abt., A.K. St. Georg, Hamburg 1

COP 01

Risk factors and multimorbidity of the aged.
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Within aged patients, a high percentage of morbidity is found. This was true in 832 patients aged from 70 up to 95 years who were treated by abdominal surgeons within a 5-years'-period (gall-bladder, bile duct, appendix operation). Cardiovascular risk was found in 39.5%, pulmonary risk in 20.1%, hypertension in 18.0%, diabetes mell. in 11.2%, liver failure 7.0% and renal insufficiency in 4.2%. As 39% of these patients showed a combination of at least 2 risk factors and only 6% had none, morbidity is even multiplied.

Postoperative complications and mortality showed a clear correlation to multimorbidity.

The data show that for cancer surgery in the aged the evaluation and therapy of surgical risk factors is of urgent importance. The more, as even within this special group of patients the extent of cancer surgery should be as adequate as possible, but must be waged carefully against quality and expectancy of life in each individual case.