Lun 14

Treatment of advanced pleuramesothelioma with Cis-platinum and Adriamycin.

H. Henß, H.H. Fiebig, J. Schildge, C. Schuchhardt, and H. Arnold

There is an urgent need for an effective chemotherapy in malignant pleural mesothelioma, because these tumors are almost invariably detected in a stage not permitting curative surgery. We treated 15 patients who presented malignant mesothelioma of the pleura with a combination chemotherapy consisting of cisplatin 60 mg/m² on day 1+2 and adriamycin 40 mg/m² on day 3. All patients had histologically confirmed diagnosis of pleural mesothelioma, 8 patients had local recurrence after primary surgery, 5 patients had incomplete resection of the tumor, 2 patients had an inoperable primary tumor. 2/15 patients achieved a complete response, 5/15 patients had a partial response as evaluated by usual criteria. Median duration of remission was 135+ days, median survival time was 233+ days.

8/15 had stable disease and 6/15 progressed after 2 courses of chemotherapy. Side effects were nausea and vomiting in 14/15 patients, alopecia in 5/15, leucopenia in 6/15, thrombopenia in 2/15 patients. Neuropathy was seen in 2/15 patients, 1 patient had reversible renal failure. Due to side effects, not more than a total of 6 courses were given per patient. We conclude that this combination is effective in advanced pleural mesothelioma; however toxicity is pronounced.

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Lun 15

PLEURODESIS USING FIBRIN GLUE IN THE TREATMENT OF RECURRENT MALIGNANT PLEURAL EFFUSIONS
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We investigated the clinical effectiveness and morbidity of a treatment of pleurodesis using fibrin glue in cases of symptomatic recurrent malignant pleural effusions. When the two components of fibrin glue (fibrinogen-protinin and trombin-calcium-chloride) come in contact, fibrin is formed. After pleural instillation of fibrin glue the resulting fibrin net serves as a frame work for growing fibroblasts, and the pleural space is then sclerosed by the formation of collagen fibres. With conventional methods of pleurodesis the formation of a fibrin net work is initiated by chemical pleuritis caused by the sclerosing agents (e.g. tetra cycline). Thus our method may provide a means of avoiding the inflammatory side effects (pleural pain and fever) of conventional sclerosants. Local pleurodesis is indicated when the standard tumor treatment fails to control the effusion. Before intrapleural instillation of a sclerosing agent the effusion should be completely drained and the lung fully reexpanded so that the two layers of pleura are in complete opposition. This is best achieved by using pleural suction drainage. In our series complete reexpansion of the lung could not be achieved in 7 of 21 patients. Fibrin glue was instilled in the 14 patients with complete lung expansion. In 12 of these patients pleurodesis was effective with no recurrence of the pleural effusion within a period of 1 to 8 months. Pleural empyema was present in 1 case of recurrent effusion. 1 patient complained of pleural pain, 5 developed fever. In summary pleurodesis using fibrin glue appears to be an effective and non-invasive means of treatment of recurrent malignant pleural effusions. Randomized comparative studies will be necessary to further access the value of this new technique. When indicated pleurodesis should be performed without delay because of the danger of lung trapping by tumor growth.

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Bre 01

THE PREDICTIVE VALUE FOR RECURRENCE OF SERUM CEA RISES IN MAMMARY CARCINOMA PATIENTS
S. von Kleist, V. Isak and H. Groppe

The predictive value of CEA rises was evaluated in the sera of 251 patients treated operatively for breast lesions: 132 were confirmed mammary carcinomas, 129 were benign lesions, they served as controls.

Within the observation period 15% of the patients having had CEA values <2ng/ml pre-operatively had recurrences, as compared to 17% of those with elevated CEA. In these, however, recurrences occurred earlier. The same held true for CEA elevations observed immediately p.op.: Patients with normal CEA values never relapsed before 12 months. A CEA rise >10ng/ml during the surveillance time meant recurrence in all cases. Also patients with rising CEA relapsed twice as frequently than those with a stable CEA.

The predictive value of the rises correlated with the %/month (m) of serum CEA increase: CEA elevations not followed by a recurrence amounted to 88%/m increase as compared to those followed by recurrences which caused rises up to 158%/m (p=0.01). A bad prognostic sign seemed to be a CEA peak observed 24h p.op. In 48% of the benign patients' sera CEA was found elevated (72% in the cancer group, p=0.01), however, elevations >5<10ng/ml were seen in only 6%. A tumor relapse in mammary carcinoma patients can be hence signaled by a rapid (20-30%/m) CEA rise or constantly elevated CEA serum levels (>10ng/ml).

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Bre 02

HIGH RESOLUTION IMAGE ANALYSIS OF FINE NEEDLE ASPIRATES OF BREAST CARCINOMA METASTASES: CORRELATION BETWEEN CYTOMORPHOLOGY AND RELAPSE-FREE-INTERVAL
U.B.Schenk, U.Schenk, G.Burger, U.Jütting, P.Gais, K.Rodenacker, J.Seelertner

In a previous visual and high resolution image analytical investigation a close correlation between the hormone-receptor-status (HRS) and nuclear structure was shown and an image-analytical malignancy grading system for breast carcinoma was established based on the HRS (Schenk, U. et al., Geburtsh. Frauenheilk. 45 1985 17). In the present study high resolution image analysis was applied to 66 Pappenheim stained fine needle aspirates of breast carcinoma metastases collected over the last eight years. About 100 cells per case were interactively selected at 100x objective magnification (oil) and recorded by TV camera. Structural, textural and photometric features were extracted from the original digitized nuclear images. In a first evaluation the duration of the relapse-free-interval as a learning information was related to image-analytical results. Relapse-free-intervals (RFI) were separated into short RFI ≤ 24 months (n=33, 3081 nuclei), long RFI ≥ 48 months (n=18, 1782 nuclei) and medium RFI >24<48 months (n=15, 1470 nuclei). Data from the cell populations of early and late metastasising carcinomas showed a statistically significant difference. The medium RFI group resembled that of short RFI. For the classification of individual cases the probability of belonging to one class or the other was calculated first for each cell. From these values a diagnostic index is established for each case. By introducing a fixed threshold the following result was obtained:

	Image analytical classification	
	≤ 24mon.	≥ 48 mon.
33 patients RFI ≤ 24 mon.	26	7
18 patients RFI ≥ 48 mon.	6	12

Classification accuracies of 65% - 75% were obtained using different statistical approaches, which demonstrates a correlation between cytology and RFI. Better results could be obtained if other important clinical parameters like survival time would enter the study.

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