RAK STIMULATION OF PERITONEAL MACROPHAGES AND ANTI-TUMOUR EFFECT OF A PEPTIDOGLYCAN MONOMER (PGM) IN MICE

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The peptidoglycan monomer (PGM) was prepared from Brevibacterium divaricatum ("Pliva", Zagreb). It produced an anti-tumour effect in several experimental tumour models. In these experiments a single dose of 10 or 60 mg/kg of body weight was injected intravenously to CBA/H/Zgr mice. Peritoneal exudate cells (PEC) were collected from the recipients 8, 16, 24, 48 or 72 hr after the injection. PEC were then incubated with yeast cells for 10 min, fixed with glutaraldehyde, and phagocytosis by peritoneal macrophages was scored under a phase contrast microscope. PGM stimulated the phagocytic ability (about three-fold) at 16 and 24 hr after the injection of 60 mg/kg. The same dose caused a pronounced anti-tumour effect against an implanted syngeneic, methylcholanthrene-induced fibrosarcoma. In view of the role of macrophages as antineoplastic cells, at least a part of the observed anti-tumour effect might be ascribed to stimulation of macrophages in tumour hosts.

RAS SURFACE ANTIGENS IN PRIMARY BREAST CARCINOMAS

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Three monoclonal antibodies (67 D11, 115 H10 and 115 C2) were applied to 194 primary human breast carcinomas from female patients in The Danish Breast Cancer Cooperative Group (DBCG) protocols. A positive reaction was observed in 31% (67 D11), 54% (115 H10), and 19% (115 C2) of the 194 cases investigated. A preponderance of antigen-positive cases were found among well differentiated tumours and tumours with high estrogen receptor content. Life table analysis (mean time of observation = 30 months) showed a better survival for patients with tumours positive for Mam 3b (115 H10). Information concerning the presence/absence of the antigens was included in a Cox-regression model. The most important prognostic factors were found to be the number of positive lymph nodes, the estrogen receptor content, and the menopausal status of high risk patients. Inclusion of information on any of the three antigens did not improve the ability of the model to predict recurrent disease. Thus, the presence of the antigens represent markers of differentiation, but are of no major prognostic significance.

REI CYTOPLASMIC AND NUCLEAR CHANGES OF NON-CILIATED BRONCHIOLAR (CLARA) CELLS AFTER 3-METHYLCHOLANTHRENE TREATMENT

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In this investigation, the distal airways of rat lungs were studied. The animals were treated with a single dose of 3-methylcholanthrene (3 MC) intratracheally. The lung samples were examined by light and transmission and scanning electron microscopical methods. The ultrastructural observations showed that the treatment with 3-MC was followed by frequent occurrence of cytoplasmic protrusions (blebs) of Clara cells for 2 weeks. After 3 weeks the number and size of blebs decreased. Cell debris in the lumens of bronchiolar ducts of untreated animals could be detected less frequently than in those of treated animals. The junctional complexes between the ciliated and non-ciliated cells were diminished following the 3rd to 4th week of 3-MC treatment. In the nuclei of treated animals the active chromatin was observed rather than heterochromatin and active types of nucleoli were frequently detected. These data suggest that 3-MC produces an increased functional activity of Clara cells.
