ARN XENOGENEIC TRANSPLANTATION OF HUMAN PRENEOPLASTIC TISSUES OF THE INTESTINAL TRACT INTO NUDE MICE

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To study further the fate of human preneoplastic tissues, 16 cases of villous and tubulo-villous adenomas of the intestine were transplanted into BALB/c-nu/nu mice. By means of the s.c. transplantation technique the following results were obtained. Without exception, the xenografts were surrounded by fibrous capsules. Most of the preneoplastic xenografts necrotized and showed extensive calcifications as signs of dystrophy. Four cases yielded maintenance of vitality for several months and after a few passages. In one case out of 16, the most important result concerned the detection of both vitally maintained tissue of polypus and development of carcinomatous structures. The malignant parts could not be visualized in the original human donor tissue. Detailed biological and cell-biological data have been obtained underlining the value of nude mice as a diagnostic tool.

AUT METABOLISM OF CHEMICAL CARCINOGENS IN CULTURED HUMAN TISSUES

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Most environmental carcinogens require metabolic activation before they can exert their carcinogenic effect. The activation of several carcinogens, especially benzo(a)pyrene (BP), has been investigated in cultured human tissues and cells that are potential targets for chemical carcinogens. The metabolism was quantitated by measuring total binding of the carcinogen to cellular DNA. A qualitative analysis of the BP-DNA adducts did not reveal any difference between the organs, whereas a 10-fold variation in the mean binding level to DNA was observed. A wide interindividual variation was observed in all organs and with different types of carcinogens. Some of the factors that may influence this interindividual variation have been investigated.

BAB MEMBRANE PHENOTYPE, ELECTROPHORETIC MOBILITY DISTRIBUTIONS AND PURINE METABOLISM ENZYMES IN LYMPHOID CELL MALIGNANCIES

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Immunologic phenotype(rosette tests, surface membrane and cytoplasmic immunoglobulin determination, as well as detection of differentiation and leukaemia-associated antigens by monoclonal antibodies - commercial, obtained from other laboratories and prepared by our group) along with electrophoretic mobility (EPM) distribution and purine metabolism enzymes (adenosine deaminase and purine nucleoside phosphorylase) have been studied in a group of lymphoid cell malignancies. Our study of EPM values showed that leukaemic cells of lymphoid malignancies (as well as corresponding haemopoietic cell lines) retain the EPM of the original cell. Purine metabolism enzyme studies proved to be useful especially in the case of T-acute lymphoblastic leukaemia.

This complete approach to the characterization of lymphoid cell malignancies showed that EPM values and purine enzyme profiles could add diagnostic refinement to the study of surface markers.
