

epithelial cords invade a connective tissue containing swollen and hyalinized collagenous fibrils and crumbling elastic fibrils. There appear isolated, not always sharply demarcated, proliferations of atypical basal cells containing numerous mitoses. Keratinizing epitheliomas and folliculo-epitheliomas develop ultimately from these atypical epithelial hyperplastic lesions. In addition to the two mentioned most common types of experimental solar carcinomas, there occur sometimes cancers resembling, morphologically, basal cell cancer of man. Other epitheliomas are composed of spindle-shaped epithelial cells giving to the tumors a sarcomatoid appearance. These sarcomatoid cancers are very similar to anaplastic carcinomas observed in mice after tar applications.

The number of cancers in the irradiated series of animals, as well as in the individual animal, increases with the duration of exposure to the carcinogenic actinic agent. Once started, the tumors grow progressively, even after cessation of irradiation (Rusch and Baumann). The evidence presented shows unequivocally that solar cancer of the skin does not originate from any embryonic epithelial germs in the skin, but arises from independent, newly formed, epithelial proliferations elicited in the epidermis under the influence of the actinic energy.

XI. PREVENTIVE AND PRECAUTIONARY MEASURES

Light sensitive individuals should avoid prolonged exposures to intense solar radiation. The wearing of wide brimmed hats and colored shawls, as well as the application of ointments and creams containing light absorbing agents to the exposed parts of the skin, may help to reduce the destructive and carcinogenic action of the actinic energy upon the epidermis. The following substances are used as active ingredients of light absorbing ointments: naphthol sodium sulphonate; lanolin; extract of the cortex of horse chestnuts; titanium dioxide; ichthammol, methyl salicylate (Bachem and Fantus).

XII. MEDICO-LEGAL ASPECTS

Occupational solar cancer of the skin is not recognized in any country among the compensable occupational diseases.

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