

abnormal susceptibility to solar irradiation, are in general less markedly developed in the acquired dermatosis (*xeroderma pigmentosum tardium*) than in the juvenile, congenital form of this disease. The vascular dilatations are in part compensatory phenomena, following the obliteration of adjacent capillaries. They may persist for a long time, thus indicating that the ectatic condition is the result of a more or less irreversible colloid-chemical alteration in the capillary endothelium. The skin becomes hard, dry and scaly during the developmental stage of these capillary changes.

With the progress of the chronic cutaneous alterations, there occur epidermal thickenings (hyperkeratoses) and scabs, which are located mainly at the temples, forehead, nose and external ear as well as on the back of the hand and on the forearm. These keratotic lesions are circumscribed, brownish, flat and later often verrucous and indurated excrescences which have a greasy crust when located on the face and scalp, or are rough and hard when situated on the hands. They may be fixed to the underlying tissue, which usually shows a deficiency of fat tissue. Sometimes the verrucous lesions merge, forming larger plaques from which cancers may develop ultimately. Multiplicity of the neoplastic lesions is the rule. Both cornified squamous cell carcinomas and basal cell cancers (rodent ulcers) may ensue from the precancerous lesions. The squamous cell keratotic cancer is the most frequent type of solar malignancy. The fully developed form of malignant solar dermatosis thus represents an epitheliomatosis or cancerosis of the skin.

Similar observations have been made in connection with the development of experimental solar and ultraviolet ray cancer in rats and mice. Beard, Boggess and von Haam; Roffo; Putschar and Holtz; and others reported that after the first two months of exposure the hairy coat of rats became ruffled, the hairs began to fall out and the skin showed eczematous lesions on the back, at the base of the tail, and on the ears. The brown scabs which appeared were scratched off frequently. Later on, the skin became dry and smooth. Then followed the development of crusts on the inflamed parts of the skin. Finally, ulcers formed at the sites of these crusts. Following a period characterized by a more or less complete repair of these lesions, the hairs started to grow again abundantly, but were often arranged in tufts. The margins of the ears became thickened and keratotic, the eyelids were swollen, while ultimately the eyeballs were destroyed. The malignant transformation of the keratotic papillomata and warty thickenings was ushered in by an ulcerative breakdown of the particular lesion.

X. HISTOLOGY

The acute radiation reaction is characterized by the appearance of polynuclear leucocytes in the vessels of the papillae and of the upper cutis. The cornified and granular epidermal layers remain morphologically unchanged, while the cells of the prickle cell layer exhibit a colloidal degeneration, accompanied