Histological histochemical and cytogenetic study of psoriasis

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The present study was conducted on 60 human beinc,scomprising 30 psoriatic patients, who stopped tt·eatment for’ 3weeks, and 30 normal volunteers. For each case~ skin biopsywas ob~ained and to clarify the hereditary role played in thepathogenesis of psoriasis, pedigrees cqnstruction,consanguinity and segregation analysis and chromosomal studywere done. The skin biopsies were stained by Hx, & E. stain;Van Gieson’s stain, Methyl Green Pyronin IM.G.P.1 stain andATPase histochemical method.Hx & E stain of os or i a e i c skin f’evea I ed f’egul at”’elongation of the epidermal ridges withdeep portion, elongation and edema ofthickeningthe der-rna Iin b b e t rpapillae,thinning of the suprapapillary portionsMalpighii, parakeratosis and absence ofof the st,-atum9 t~anu 1at” layer”,intermingled with orthokeratosis with presence of granularlaye,”. Also, Munro microabscesses diagnostic fat”psor”iasis.By Van Gieson’s stain. the nuclei appea,”ed black b r-ownto black, and the collagen fibers stained red. There wasthickenning in the epide,”mis of psor-t a t t c skin and coll.agenfibers in the dermis appeared more condensed and thet”e wasIncrease in the numbet’ of fibroblasts;~uclei.T·his slJqgested anincrease in the activity of psoriatic fibroblasts.By M. G. P. stain. the RNA of cytop lasm appea.’ed ”ed andnuclear DNA appeared blue green. The amount of DNA and RNAincreased in the epidermis of psoriatic skin when compared tothat of normal skin.By ATPase histochemical staining method. the L. Cs.couldbe demonstrated and appeared as dendritic cells, polygonal tooval cells, or as dendritic fragments. Normal skin showed thecells as continuous network in the suprabasal Malpighian layerand they were demonstrated in hair follicles. The cells werenevet”’ seen in the stratum corneum. No cells coulddemonst.’ated in the dermis but they were confIned tobetheducts of sweat glands.In psoriatic 5pecimens,howevet’, the dlstt”’ibution of L.Cs. alte.’ed completely f rom that of rror-ma l skin. In 20 cases,large segments of the epidermis were totally de~oid of L. Cs,though their distribution in hair follicles was conserved. Inthe remainder 10 cases, there was abnormal clustering of.L. Cs.in the epidermis and groups of ATPase +ve cells were found atany level of the epidermis and frequently at the tip of dermalpapillae and in dermal papillae themselves. Also, L. Cs.reached the stratum corneum. In the dermis of psoriaticclusters of L. Cs.could be demonstrated and clusters alsoappea,’ed in the dermal papillae. The mean number of L.Cs /449:’:10.42 mmwas 455 ±11.6 in normal male skin and in rior-ma lfemale skin. Thet·e was no sex difference of L. • Cs· density. Themean number” of

LCs/mm2 in psot’’iatic male skin was 112!1’7.1 and114-18.2 in psoriatic female skin .The density of L. Cs. wassignificantly decreased in psoriatic skin at P