

LETTERS TO THE EDITOR

Proliferation of Merkel Cells in the Skin

Sir, In their report, Vaigot et al. (1) stressed an important point: the great majority of Merkel cells (MC) are non cycling cells. This needs further comments.

Pr.1.h. monoclonal antibody is an antibody of human origin which specifically recognizes MC when the rabbit lip epithelium (RLE) is used as substrate (2). In a preliminary study from our group (3), using coupled autoradiography and immunoperoxidase with the Pr.1.h. monoclonal antibody, we counted 811 Pr.1.h. immunoreactive cells in the RLE of 3 adult rabbits. Among these 811 immunoreactive cells, 21 showed evidence of ^3H -thymidine incorporation, i.e. more than 5 silver grains in their nucleus. This represents 2.59% of the immunoreactive cells. Because this high percentage of potentially dividing MC does not correlate with ultrastructural observations (mitoses of adult MC have never been demonstrated by electron microscopy, although thousands of MC have been studied in various animals) it was felt that this could represent a technical artifact, therefore we continued our investigations using autoradiography on semi thin sections (3). In this set of experiments, MC can be readily recognized as clear cells by light microscopy in selected areas of RLE (2). We counted 1084 clear cells in the RLE of 4 adult rabbits, whereas only 353 clear cells were present in the RLE of 3 newborn rabbits (Table I). Two among the 1084 clear cells of adult RLE and one of the 353 clear cells of the newborn RLE showed evidence of ^3H -thymidine incorporation (Fig. 1). This represents 0.18% of the clear cells counted in adult rabbits and 0.28% of the clear cells counted in newborn rabbits; or 0.21% of the clear cells of both newborn and adult rabbits. This latter percentage is close to the 0.1% found by Vaigot et al. (1), using

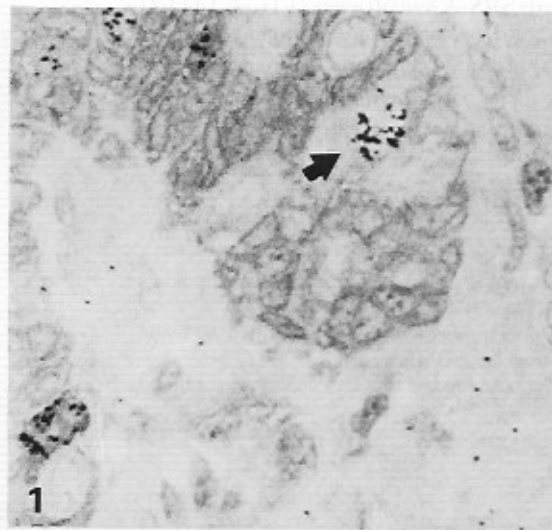


Fig. 1. Rabbit lip epithelium: autoradiography on semi thin sections. One clear cell (i.e., Merkel cell) shows evidence of ^3H -thymidine incorporation (\rightarrow).

Fig. 2. 13-day-old mouse embryo (developing vibrissae): mitotic cell showing dense core membrane-bound granules (\rightarrow) characteristic of Merkel cells.

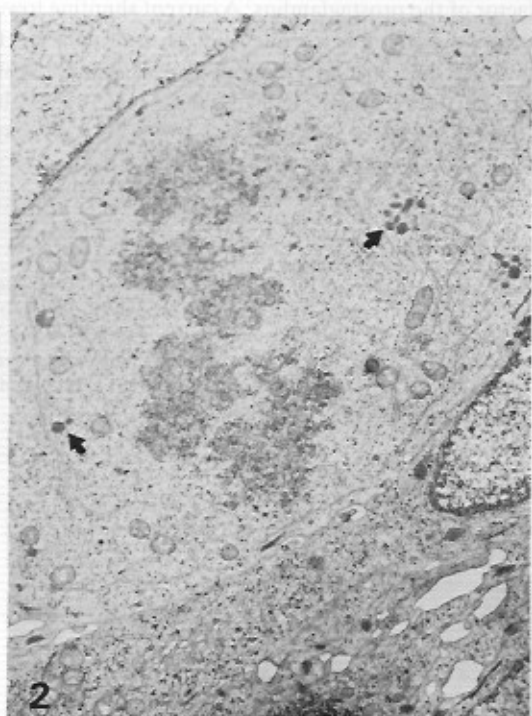


Table I. Autoradiography on semi thin sections using rabbit lip epithelium as substrate Merkel cells appear as clear cells (2)

	Number of clear cells	Number of ³ H-thymidine cells	Number of ³ H-thymidine (% of clear cells)
Adult rabbits	1 084	2 476	2 (0.18%)
Newborn rabbits	353	1 573	1 (0.28%)
Total	1 437	4 049	3 (0.21%)

another technique. However, all these studies were conducted on adult or newborn animals (rats, rabbits). Actually, they tend to demonstrate that at least post-natal epidermal MC are not a cycling population.

To our knowledge, immunohistology or autoradiography have not yet been performed in embryos, where cycling MC should be more numerous.

We recently observed several dividing MC on early mouse embryos by electron microscopy (Fig. 2) (4); this suggests that MC can be cycling cells too, but that their proliferative capability could be restricted to early gestational age when they first appear in the epidermis and appendages.

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Yves Merot and Jean-Hilaire Saurat, Clinique de dermatologie, Hôpital cantonal universitaire, 1211 Geneve 4, Switzerland.

Skin Tags Are More Closely Related to Fasting Insulin Than Fasting Glucose Levels

Sir, In their recent article, Kahana et al. (1) demonstrated that skin tags provide a cutaneous marker for non-insulin dependent diabetes mellitus (DM). We suggest that skin tags are more directly a marker of raised circulating insulin levels. Of 13 consecutive patients (age range 31 to 76 years) presenting with skin tags, raised fasting insulin levels (range 20 to 103 mU/l; normal range 0.75 to 14 mU/l) were found in 8. In contrast, fasting glucose levels were raised in only 2, both found to have previously undiagnosed DM. Mean number of skin tags was 20 (range 2-55) in patients with supranormal fasting insulin levels, 9.5 (3-24) in those with normal levels.