

Decreased Capillary Resistance of the Uninvolved Skin in Psoriasis

Sir: Numerous morphological changes of the capillary loops have long been recognized in psoriatic lesions. These changes can even precede the epidermal hyperplasia and are obviously present in the clinically unaffected skin, too (1). On electron microscopy, the dermal capillaries in psoriasis appear to have rather venous characteristics as opposed to the arterial structure in the normal skin (2).

To our knowledge, the capillary resistance (CR) has not previously been measured directly in psoriasis.

We therefore set out to determine the CR in the normal-appearing skin of psoriatic patients and compared the result with the normal value obtained in healthy volunteers. Twenty healthy individuals (7 male and 13 female, aged 28–54 yr, mean 41.4 yr) and 46 psoriatic patients (26 male and 20 female, aged 30–52 yr, mean 39.6 yr) were included in the study. All the patients were suffering from active, plaque-type psoriasis vulgaris affecting at least 20% of their body surface. The patients did not receive any treatment during the last three months. The measurement technique chosen was a suction method with Parrot's angiosterrrometer (3). The CR was designated as the minimum suction value (expressed in mmHg) at which the first central petechia occurred after application of the suction cup (2 cm in diameter) for one minute. Each measurement was carried out on the right scapular region of the back.

The CR of psoriatic patients was significantly lower than that of healthy individuals (112.3 ± 24.49 mmHg and 178.3 ± 28.44 mmHg, respectively, $p < 0.001$). In 1980, Staricco (4) reported on a decreased petechial threshold of the clinically uninvolved skin in psoriatics after tape stripping. The drawback of that type of study, however, is that tape stripping induces numerous structural and histochemical alterations of the skin (1, 5, 6), and therefore the method does not permit to draw a definite conclusion as regards the dermal CR.

With the technique we used, the epidermis remains spared and apparently devoid of injurious influences.

The presence of elongated and tortuous capillary loops in the dermal papillae, even in normal-appearing skin (1), might contribute to the decreased suction value we measured. It is more likely, however, that the venous-like changes in the endothelial structure of the psoriatic capillaries are the primary cause of the lower CR. The observation by Lee & Lee (7) that the first petechial bleeding after vacuum suction originates from venous leaking argues strongly for this assumption.

Our finding provides the first functional evidence fitting in well with the earlier morphological observations on the disturbed microvasculature in the clinically unaffected skin of psoriasis patients.

REFERENCES

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2. Braverman IM, Yen A. Ultrastructure of the capillary loops in the dermal papillae of psoriasis. *J Invest Dermatol* 1977; 68: 53–60.
3. Parrot JL. L'angiosterrrometre, appareil pour mesurer la résistance des capillaires. *Presse Med* 1954; 62: 614.
4. Staricco RG. Altered capillary response to tape stripping in psoriasis and some other dermatoses: the petechial threshold test. *Dermatologica* 1980; 160: 315–320.
5. Chapman PH, Rawlins MD, Shuster S. The activity of aryl hydrocarbon hydroxylase in psoriatic skin. *Br J Dermatol* 1979; 101: 101–108.
6. Lawrance CM, Shuster S. Mechanism of anthralin inflammation. 2. Effect of pretreatment with glucocorticoids, anthralin and removal of stratum corneum. *Br J Dermatol* 1985; 111: 117–122.

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ANNOUNCEMENTS

4th International Symposium on the Treatment of Psoriasis & Psoriasis-arthritis will be held in Jerusalem, Israel, 5-12 March 1989. For further information please contact: Health Vacation Center, O.O.B. 99, Ramat Hasharon 47100.

The NATO Advance Study Institute on Skin Pharmacology and Toxicology—Recent Advances will be held in Riva del Garda, Italy, 9-19 April 1989. Maximum of 60 participants. For further information please contact: Organizing Secretariat, Dr. Nadia Bauer, Centro di Biologia e Tossicologia Cosmetologica, University of Milan, Via Balzaretti 9, 20133 Milan, Italy, Tel. 02-29404672.

The 16th Annual Meeting of the Society for Cutaneous Ultrastructure Research (SCUR) will be held in Köln, West Germany, 9-10 June 1989. For further information please contact: Prof. Dr. Gustav Mahrle, Department of Dermatology, University of Köln, Joseph-Stelzmann-Str. 9, D-5000 Köln 41, Germany, Tel. 00949-221-478-5086.

The XII "Fortbildungswoche für Praktische Dermatologie und Venereologie" in Sheraton Hotel, München, for German speaking dermatologists will be held in July 23-28, 1989. For further information please contact: Prof. Dr. J. Ring, Dermatologische Klinik der LMU, Frauenlobstr. 9-11, D-8000 München 2, Tel. 089-5397672/662.

9th International Symposium on Contact Dermatitis will be held in Stockholm, Sweden, 17-19 May 1990. For further information please contact: Prof. Jan E. Wahlberg, Contact Dermatitis, 1990, Karolinska Hospital, S-10401 Stockholm, Sweden.

Erratum

"Local and systemic effect of UVB irradiation in patients with chronic hand eczema" *Acta Derm Venereol (Stockh)* 1987; 67: 538-541.

Unfortunately an incorrect statistical method was used. When a correct method (Wilcoxon rank sum test for non paired observations) is applied statistical significant ($p < 0.05$) is obtained only between the groups of patients treated with whole body UVB exposure with additional irradiation of the hands versus placebo.

Book received

A Colour Atlas of AIDS and HIV Disease edited by C. F. Farthing, S. E. Brown and R. C. D. Staughton, 1988, 115 pp. 281 figures. ISBN 07234-0995-1. Price £16.00. W. S. Cowell Ltd, Ipswich, England. An excellent book that makes anyone aware of the clinical symptoms (Editor's comment).