In Reply

B.

Bengt

Lindegård

Sweden

Professor Bengt Lindegård, MD, Department of Social Medicine and Clinical Epidemiology, University of Gothenburg, PO Box 5008, 42105 Västra Frölunda (Sweden)

Coexisting Diseases or Disease Association?

Since the days of Hippocrates and up to the immunogenetic era of today, studies into disease association represent a major source of contribution to our scientific understanding of the origin and mechanism of disease. Among the Hippocratic aphorisms, we will find the following statement (Section VI, No. 42): 'In cases of jaundice it is a bad sign when the liver becomes hard' [1]. Modern immunogenetic research has revealed, for example, that the HLA complex of A1, B8, DR3 indicates relationships between diseases such as early-onset diabetes, alcoholic liver disease, myasthenia gravis or dermatitis herpetiformis not yet explained by laboratory medicine [2]. Community-based studies of a general population for coexistence of two diseases like psoriasis and diabetes mellitus or urticaria are aimed at the same scientific goal. This is what clinical epidemiology is about.

Any physician, whether he is placed in a hospital ward or in a district practice, will notice the simultaneous occurrence of different diseases in a given patient. Such observations, however, do not permit of general conclusions as to the relationship between the diseases under consideration. Instead, their coexistence may be occasional in a given case or spuriously suggesting a disease association if observed in a sample of patients: it may reflect local principles of patient referral to a particular hospital ward, outpatient clinic, and so forth. For example, in one general hospital cerebrovascular diseases may be taken care of at the department of neurology while in another at the department of internal medicine. Statistics on coexistence between stroke and diabetes will obviously yield different outcome in these two hypothetical hospitals and both will presumably differ from the outcome of studies performed on a general population basis in the research setting of a community-based inquiry [3].

The communication of Dr. Krasteva and associates, I am sorry to say, suffers from these methodological shortcomings and their data accounted for, hence, may reflect local conditions at their hospital ward rather than the relationship in general between psoriasis and diabetes or urticaria. For better or worse, they are not alone in overlooking basic principles of clinical epidemiology; recent contributions in other distinguished medical journals have required similar comments [4, 5].

References

Lloyd G, (ed): Hippocratic Writings. London, Penguin 1978.

Tiwari JL, Terasaki PI: HLA and Disease Associations. New York, Springer 1985.

Lindegård B, Hillbom M: Associations between brain infarction, diabetes and alcoholism:

Observations from the Gothenburg population cohort study. Acta Neurol Scand 1987;75:195-200.

Letters to the Editor

Lindegard B: Diabetic microangiopathy and joint disorders. *Lancet* 1987;ii:576.

Lindegard B: Alcohol and breast cancer. *N Engl J Med* 1987;317:1285.

different mechanisms between the action of retinoids and that of vitamin D3 on psoriasis.

Masaki Okano, MD Yukio Kitano, MD Kunihiro Yoshikawa, MD Department of Dermatology
Osaka University School of Medicine Osaka(Japan)

A Trial of Oral 1 α -Hydroxyvitamin D3 for Ichthyosis

Sir,

Recent studies concerning the effects of the active form of vitamin D3 for psoriasis [1-3] are currently a dermatological topic. The true mechanism of the successful evidence, however, is unknown, though there are some reports which hypothesize the mode of action related to its control on growth and differentiation of keratinocytes [1-4]. The development of retinoid, a vitamin A derivative, produced an epochal advance in therapy not only for psoriasis but also for ichthyosis in recent years, and it might be interesting to examine the effects of the active form of vitamin D3 on ichthyosis, a representative of the keratinizing disorders other than psoriasis. We studied 7 cases with X-linked ichthyosis and 3 with ichthyosis vulgaris. The distinction between these diseases was determined by measuring steroid sulfatase activity of peripheral blood lymphocytes [5] and electrophoretic mobility of serum LDL [6]. All the patients were orally administered 1 μ g per day of 1 α -hydroxyvitamin D3, which is converted to hormonally active 1 α ,25-dihydroxyvitamin D3 in the liver [7]. During the study, no ointment was applied to the ichthyotic lesion. Throughout the observation period of 2 months, no remarkable tendency to skin improvement was achieved by oral 1 α -hydroxyvitamin D3 therapy. These data suggest that there are

References

Morimoto, S, Kumahara Y: A patient with psoriasis cured by 1 alpha-hydroxyvitamin D3. *Med J Osaka Univ* 1985;35:51-54.

Kato T, Rokugo M, Terui T, et al: Successful treatment of psoriasis with topical application of active vitamin D3 analogue, 1 alpha, 24-dihydroxychole-calciferol. *Br J Dermatol* 1986;115:431-433.

Morimoto S, Onishi T, Imanaka S, et al: Topical administration of 1,25-dihydroxyvitamin D3 for psoriasis: report of five cases. *Calcif Tissue Int* 1986;38:119-122.

Hosomi J, Hosoi J, Abe E, et al: Regulation of terminal differentiation of cultured mouse epidermal cells by 1 α ,25-dihydroxyvitamin D3. *Endocrinology* 1983;113:1950-1957.

Okano M: X-linked ichthyosis – its diagnosis and genetic analysis by measuring steroid sulphatase activity of peripheral blood lymphocytes and statistics of clinical features (in Japanese with English abstract). *Skin Res* 1986;28:117-127.

Okano M, Kitano Y, Nakamura T; et al: Detection of heterozygotes of X-linked ichthyosis by measuring steroid sulphatase activity of lymphocytes. Mode of inheritance in three families. *Br J Dermatol* 1985;113:645-649.

Fukushima M, Suzuki Y, Tohira Y, et al: Metabolism of 1 α -hydroxyvitamin D3 to 1 α , 25-dihydroxyvitamin D3 in perfused rat liver. *Bio-chem Biophys Res Commun* 1975;66:632-638.