Comment

Dermatology is a branch of medicine which is developing rapidly both in terms of research on etiopathogenesis of diseases and in therapies. The presented papers comment on various topics from this area. These topics are often encountered in practice. I hope that the issues presented in this series of papers would be of interest for a wide spectrum of readers.

In the last decades, we have witnessed dynamic progress in the area of molecular biology.

An original collective paper pertains to molecular research of non-melanoma skin tumours (the Molecular Biology Department, the Dermatology Department and Clinic, the Medical Genetics Department, the Cosmetology Department, Institute of Structural Research of Skin of the Medical University of Silesia, Katowice). The molecular research was to specify diagnostic and prognostic markers that would supplement clinical diagnostics and to develop new therapies. A large molecular similarity between keratoacanthoma and spinocellular (squamous cell) carcinomas has been shown. The basal cell carcinomas group showed heterogeneity with two subgroups of different mRNA copies of MMP10 and MMP2 genes. MMP1 gene transcripts concentrations were significantly increased in every study group in comparison with the control group. The increase of the number of copies of MMP10 mRNA and the MMP2 decrease are likely candidates to be prognostic markers in patients with basal cell carcinoma. The potential universal target in the molecular therapy in non-melanoma skin carcinomas is metalloproteinase 1 encoding gene.

The next two original papers by Dr. hab. med. Anna Lis-Święty from the Dermatology Department and Clinic of the Medical University of Silesia and the Molecular Biology Department of the Medical University of Silesia concern applying of the real-time QRT-PCR technique to examine the number of copies of mRNA of the TGF-β1 and TNF-α encoding genes and their receptors in blood cells in patients with systemic scleroderma (SSc). The research implies that in the period before the SSc development (isolated RP), TGF-β1 gene expression in the blood cells is decreased. When the symptoms of the disease are visible, the expression increases again. The consequences of these changes might be unfavourable in both stages: the stage of vasomotor alterations and in the stage of fibrosis. On the other hand, disorders of the proportion of trans-membrane forms of TGF-β1 receptors may lead to abnormal activation of signalling pathways in cells, the consequence of which might be pathologic activation of certain processes.

In a paper concerning TNF-α, the authors have determined a decreased expression of this molecule in blood cells of SSc patients. It might be a decisive factor in the process of fibrosis because TNF-α is a principal anti fibrogenic cytokine. Significantly lower number of mRNA copies of TNF-αRI and TNF-αRII receptors than in the control group was shown. The increase of the proportion of TNF-αRI/TNF-αRII in SSc patients seems to indicate that TNF-αRI might be responsible for the fibrosis, while TNF-αRII might have the opposite effect.

An original paper from the Dermatology and Venereology Department and Clinic of the Medical University of Łódź deals with the problem of low folic acid concentration as one of the factors predisposing to the development of basal cell skin carcinomas and its deficiency might be deemed as one of factors increasing the risk of carcinogenesis in the skin.

The paper of Dr. med. Beata Bergler-Czop et al. from the Dermatology Department and Clinic of the Medical University of Silesia shows very interesting aspects of dermato-mucosal side effects of the oral retinoids used in simple acne. Isotretinoin therapy causes a significant decrease of skin moisturising and an increase of transepithelial water vaporization. These parameters are changed to a similar degree during the therapy, independently of the therapeutic model. In all patients on oral isotretinoin, the dermato-mucosal side effects of the therapy are present, and the drug dose modifications influence these symptoms to a minor degree. Unfavourable changes of the skin parameters, like decrease of the skin moisture and a TEWL increase, return to the level of the control group after the termination of the therapy. On the basis of the analyses performed, the conclusions were drawn that the new therapy scheme – that is the most beneficial model of the isotretinoin dosing – consists in a constant dose of the drug 0.4-1.0 mg/kg of body weight per day, without modification during the treatment. The effects of this therapy model are the best, the therapy is the shortest, and the dermato-mucosal symptoms are similar or even less pronounced than in other evaluated retinoid dosing schemata.

Calcidiol concentration in psoriasis patients treated with NB-UVB irradiation was mentioned in another paper: the 25(OH)D level in the sera of these patients was lower than the recommended one; this abnormality was caused by incorrect nutrition and behavioural habits. The initial calcidiol concentration is an essential factor influencing the increase of vitamin D production caused by UVB 311 nm irradiation. The UVB/J/cm^2 dosage of irradiation administered during the therapy was sufficient for most of the patients to achieve constant high calcidiol concentration and masked its seasonal changeability detected in the control group. The initial 25(OH)D level is independent of the BMI, age, sex, a previous UVB phototherapy

or PASI index, and the initial level of these parameters does not influence the level of 25(OH)D during the subsequent examinations.

The last original paper concerns the influence of atorvastatin and perindopril on the hair cycle on the animal model – the risk of drug induced hair loss in cardiologic patients. In all the analysed groups receiving these drugs, precocious catagen involution and an increase of the percentage of the telogen hair were found. The studied drugs influence the course of the hair cycle and are responsible for drug induced alopecia of varied picture dependent on the time of the exposure. Nowadays, when the progress of medicine is enormous and the pharmaceutical industry introduces numerous drugs with a lot of adverse effects, the problem of the drug induced hair loss becomes apparent. The ageing of society, polypharmacy, comorbidities as well as the basic disease are the factors confounding the picture, and therefore I find this paper most interesting.

The next group of four reviews pertains to the problems essential in clinical practice. The first one presents clinical trichology, i.e. shows the new developments in pathogenesis and treatment of the hair disorders since in the recent years, parallel to the progress of the civilisation, the problems of alopecia becomes more and more important both in terms of incidence as well as inefficient treatment.

Another paper that I would like to draw your attention to deals with contact allergy to glycocorticosteroid preparations – the paper was submitted by the Dermatology and Venereology Department and Clinic of the Medical University of Łódź. The authors focused on the contemporary knowledge on contact allergy to glycocorticosteroids, which were deemed as the allergens of the year 2005. Glycocorticosteroid are one of the most widely used medicaments in contemporary pharmacopeia. Contact allergy to glycocorticosteroids is a serious diagnostic and therapeutic challenge as the pharmacologic features of these substances often mask their ability to induce contact allergy (which is more and more common). The diagnosis of contact allergy to glycocorticosteroid increases the chances of remission and improves patients' quality of life.

The paper by Professor Grażyna Chodorowska from the Lublin centre summarises the current knowledge on acne inversa, especially its therapies. It is a literature review and presents recent developments.

Professor Jacek Szepietowski and Dr. hab. med. Adam Reich in the article entitled 'Chronic pruritus being still a challenge, yet with new development directions mapped out' claim that despite the high frequency of pruritus cases, its effective treatment is still a challenge due to the complex pathogenesis. However, the discoveries of the last decade have brought fast developments in this area, which lets us expect new, effective and well-tolerated therapies in the near future. Their paper is a literature review presenting the most important discoveries of the recent years. Those discoveries have deepened our knowledge on pruritus and will undoubtedly have an influence on diagnostics and treatment in patients with chronic pruritus in the coming years.

I do hope that the elected papers will meet your expectations and you will find them interesting.

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