

REVIEWS

V. Milanova, A. Toncheva, N. Ivanovska and P. Dimitrova. THE SIGNIFICANCE OF ANIMAL MODELS OF RHEUMATOID ARTHRITIS

Summary. Rheumatoid arthritis (RA) is a chronic inflammatory disease associated with the destruction of cartilage and bone. Experimental models of RA perform a great platform to study the mechanisms involved in the pathogenesis of the disease. In the present review, most popular animal models of RA are described. Data on experimental models induced by injection of specific antigen, unspecific immunogens and infectious agents or by passive transfer of antibodies are discussed. Investigations on transgenic animals which spontaneously develop arthritis are also included as they show the significance of particular pathway or molecule for the development of RA. The development of novel therapeutic strategies requires intensive studies on RA experimental models to prove their efficacy and side effects.

Key words: experimental models, rheumatoid arthritis, transgenic animals, cytokines, passive transfer of antibodies

Tzv. Petranova and I. Sheytanov. TREATMENT OF RHEUMATOID ARTHRITIS FROM THE PATIENT PERSPECTIVE

Summary. Chronic diseases, to which rheumatoid arthritis (RA) belongs, are often associated with poor compliance and persistence to therapy. For the optimization of these parameters, it is necessary that patients' perceptions and preferences become a major source of information for the clinical guidelines for treatment of RA. The RAISE (Rheumatoid Arthritis: Insights, Strategies & Expectations) survey is an educational initiative designed to explore the management and treatment (biologic and non-biologic) of RA, from both physician and patient points of view. The results show that biological therapies (Enbrel, Humira, Remicade) offered relief for the most severe symptoms of RA. Significantly more biologic experienced than biologic naive patients were satisfied with their current medication. The most important characteristics of treatment from the patient point of view were evaluated – proven and consistent efficacy between doses, fewer reactions at the injection site, reduced dosing frequency, easier to use device for self-injection and simple instructions. In addition, a summary of Simponi (golimumab) studies in patients with RA is presented. Simponi is a new TNF- α human monoclonal antibody that provides a new opportunity to meet the unmet needs and preferences of patients – a convenient method of administration – subcutaneously, once monthly at the same date, very good therapeutic efficacy, maintained between doses, reduced pain and inflammation at the site of injection.

Key words: rheumatoid arthritis, biologic therapy, TNF- α inhibitors

ORIGINAL ARTICLES

D. Tanev, R. Robeva, S. Andonova, M. Nikolova, M. Stoycheva, A. Tomova, Ph. Kumanov, A. Savov, R. Rashkov and Zl. Kolarov. SYSTEMIC LUPUS ERYTHEMATOSUS AND ESTROGEN RECEPTOR POLYMORPHISM IN BULGARIAN WOMEN

Summary. Systemic lupus erythematosus (SLE) is an autoimmune disease, which affects predominantly women. Estrogens modulate the growth, differentiation and proliferation of lymphoid cells, the synthesis of cytokines and antibodies, as well as the processes of apoptosis. Female sex hormones act on different tissues through the estrogen receptors. The aim of our study was to investigate the role of the polymorphic regions PvuII T/C and XbaI A/G in the estrogen receptor alpha gene ($ER\alpha$) for the development and clinical characteristics of systemic lupus. 112 women with SLE and 50 controls were investigated. The allele frequency of the two polymorphisms was similar among patients and healthy women. Some relationships between $ER\alpha$ polymorphisms and some of the clinical features of SLE were established. In the patients with genotype ppxx (TTAA), photosensitivity was less frequent, than in the others, while neurological involvement was not present in patients with genotype PPXX (CCGG). In conclusion, we suggest that PvuII T/C and XbaI A/G polymorphisms of $ER\alpha$ gene are not crucial for the development of SLE, but they presumably modulate the clinical features of the disease.

Key words: systemic lupus erythematosus, estrogen receptor, PvuII, XbaI polymorphism

V. Reshkova, R. Rashkov and I. Milanov. EVALUATION OF THE DEPENDENCE OF PAIN THRESHOLD ON SERUM CONCENTRATION OF THE NEUROMEDIATORS ADRENALINE, NORADRENALINE AND SEROTONIN IN PATIENTS WITH FIBROMYALGIA (POSITIVE FOR IgG EPSTEIN-BARR VIRUS)

Summary. The present clinic observation was conducted in the Rheumatology Clinic for the period September 1 2010-November 1 2010. The pain threshold scores were assessed in 21 patients using a Fisher dolorimeter and thus 3 men and 18 women aged 22-58 years were diagnosed with fibromyalgia (FM) (FM mean duration: 1-10 years). All patients were positive for IgG Epstein-Barr virus (EBV). In that way, only one group of patients was formed. In this group, there were prevailing patients with very high titer of IgG for EBV – in 16 of 21 patients the EBV IgG titers were 5 to 10 times above the normal control level. In 13 of 21 FM patients with high levels of EBV IgG titer (65%), a low concentration of adrenaline was observed (below the normal control level). Only in 6 of 21 patients, the concentration of noradrenaline in plasma was below the normal control level. In testing the concentration of serotonin in patients plasma, there were established low concentrations (up to 50 ng/l) in 8 patients and in 3 patients the concentrations were below the normal range, eg. 11 of 21 patients (50%) had low concentrations of serotonin. Therefore our results revealed a relationship between decreased pain threshold and serotonin. Perhaps even in patients with normal plasma concentrations of serotonin, disturbances in its transport through the blood-brain barrier (BBB) could be observed.

Key words: fibromyalgia, serotonin, adrenaline, noradrenaline

CONTENTS

NATIONAL CONFERENCE ON RHEUMATOLOGY WITH INTERNATIONAL PARTICIPATION

PLENARY REPORTS/ SCIENTIFIC ANNOUNCEMENTS

<i>Altankova, I.</i> Autoantibodies and autoimmune rheumatic diseases	11
<i>Antonov, B., M. Murdzheva, I. Bochev, L. Tsvetanov, P. Kinov and S. Kyurkchiev.</i> Immuno-modulatory effect of human mesenchymal stem cells	11
<i>Baleva, M. and Kr. Nikolov.</i> The autoantibodies in rheumatoid arthritis	12
<i>Borisova, A.-M.</i> Physiology and pathophysiology of bone remodelling	12
<i>Varbanova, B.</i> Does juvenile arthritis “grow up”?	13
<i>Gay, R. E.</i> Mentoring: an essential in career development of physician scientists	14
<i>Gay, St.</i> Epigenetics in autoimmunity	14
<i>Dimić, Al., S. Stojanović, B. Stamenković and S. Milenković.</i> Bone microarchitecture assessed by TBS, its correlation with DXA and validity in predicting osteoporotic fractures	14
<i>Dimov, D.</i> Contemporary and perspective medicaments in gout and hyperuricemia	15
<i>Dimov, D.</i> Modern therapeutic possibilities in primary systemic vasculitides	16
<i>Geneva-Popova, M., St. Alimanska, L. Stoyanova and St. Kuzmanova.</i> Immunizations in systemic lupus erythematosus and rheumatoid arthritis	16
<i>Ivanova, M., R. Stoilov and I. Manolova.</i> Analysis of serum levels of TNF- α in connection with the disease activity in patients with ankylosing spondylitis	17
<i>Ivanova-Todorova, E., D. Kyurkchiev, S. Marincheva, R. Rashkov and I. Altankova.</i> Comparative study of antibodies against citrullinated peptides (anti-CCP2 and anti-MCV)	17
<i>Yoneva, Ts., R. Rashkov, D. Kalinova, V. Reshkova, Ya. Zdravkova and L. Marinchev.</i> Nosologic belonging of patients with necroses during examination	17
<i>Kalinova, D., E. Ivanova, D. Kyurkchiev, S. Dimitrov, I. Altankova, R. Rashkov and V. Kadinov.</i> Frequency of autoantibodies among a group of myositis patients	18
<i>Kastelov, R.</i> Does the early surgical treatment of osteoporotic proximal femoral edge fractures lower the mortality	18
<i>Kolarov, Zl. and R. Shumnaliev.</i> Genetics and rheumatic diseases – achievements, perspectives, unanswered questions	19
<i>Kuzmanova, St.</i> Diagnostic and prognostic role of anticyclic citrullinated protein autoantibodies in rheumatoid arthritis	19
<i>Kyurkchiev, D., E. Ivanova-Todorova and I. Altankova.</i> Mesenchymal stem cells, isolated from fat tissue, influence the expression of FoxP3 and the secretion of IL-10 by T-helper lymphocytes	19
<i>Lambova, S. and U. Müller-Ladner.</i> Correlation of the capillaroscopic picture with the presence of digital ulcerations in progressive systemic sclerosis	20
<i>Manolova, I., M. Ivanova, L. Miteva, E. Aleksandrova, R. Stoilov, R. Rashkov and S. Stanilova.</i> Role of genotypes of immunoregulatory cytokines interleukine (IL)-10 and transforming growth factor beta 1 (TGF-beta1) for the development of systemic lupus erythematoses	21
<i>Marinchev, L., R. Nestorova, R. Rashkov, V. Peycheva, Zl. Kolarov, Ts. Petranova, S. Monov and R. Stoilov.</i> Efficacy of Ibandronate versus Zoledronate in postmenopausal osteoporosis	21
<i>Marincheva, S., R. Rashkov, Zl. Kolarov and R. Stoilov.</i> Autoinflammatory syndromes in rheumatologic practice	22
<i>Marincheva, S., R. Stoilov, R. Rashkov, V. Peycheva, Zl. Kolarov, I. Parvova, M. Ivanova, D. Dimitrova, L. Marinchev, S. Monov and D. Kalinova.</i> Clinicolaboratory profile of early rheumatoid arthritis in a Bulgarian patient population	22
<i>Mihaylova, D., St. Stefanov and M. Krumov.</i> Efficacy and safety of the therapy with Etanercept and Adalimumab in juvenile idiopathic arthritis	23
<i>Monov, S.</i> B-cell therapy in systemic lupus erythematosus	23
<i>Nestorova, R., E. Naredo, R. Rashkov, Tsv. Petranova, I. Sheytanov, S. Monov, Zl. Kolarov and A. Batalov.</i> Static or dynamic sonographic assessment of subacromial impingement syndrome?	24
<i>Nikolov, N., M. Panchovska and Zl. Kolarov.</i> Organization of the rheumatologic care	25
<i>Peycheva, V.</i> Rheumatic diseases and thrombocytic activity	25
<i>Petranova, Tsv., R. Rashkov, I. Sheytanov, R. Nestorova, A. Batalov and S. Monov.</i> Ultrasound diagnostics of gouty arthropathy – our experience	25
<i>Popivanov, Pl.</i> Atypical fractures	25

<i>Parvova, I., R. Rashkov and E. Hristov. Drug safety in application of biotechnologic medicinal products – practical approaches.....</i>	26
<i>Rashkov, R. The value of thermography in medical and rheumatologic practice</i>	27
<i>Reshkova, V. and R. Rashkov. Assessment of the dependency and the degree of pain threshold in patients with fibromyalgia (Epstein-Barr virus positive) on plasma concentration of the neuromediators serotonin, adrenaline, noradrenaline.....</i>	27
<i>Sapundzhiev, L. Comparison of the therapeutic effect of local depot corticosteroids and local anesthetics applied intraarticularly under fluoroscopic control in hip osteoarthritis</i>	28
<i>Sapundzhiev, L. and A. Batalov. Comparison of the methods of guided arthrocentesis of the hip joint – ultrasonographic and fluoroscopic quided arthrocentesis (accuracy, performance time, price, hazards) – advantages and disadvantages of the methods.....</i>	28
<i>Sarafyan, V. TLRs (toll-like receptors) in rheumatology – for whom the bell rings?</i>	29
<i>Sokolov, D., L. Tsvetanov and P. Kinov. Severity of osteoporotic fractures of the proximal femur</i>	29
<i>Solakov, P. The new criteria ACR/EULAR 2010 – a step forward in diagnostics and therapy of rheumatoid arthritis.....</i>	30
<i>Stavrev, Vi. Comparative analysis of balloon kyphoplasty and vertebroplasty in osteoporotic spine fractures in the thoracic-lumbar area.....</i>	30
<i>Stoilov, R., M. Ivanova, N. Stoilov and S. Marincheva. Expenses for treatment of rheumatoid arthritis, ankylosing spondylitis and psoriatic arthritis with synthetic and biologic disease-modifying antirheumatic drugs in 2010 in Bulgaria.....</i>	31
<i>Tanev, D., R. Robeva, S. Andonova, G. Kirilov, A. Savov, A. Tomova, Ph. Kumanov, R. Rashkov and Zi. Kolarov. Androgens and androgen- receptor (CAG)n polymorphism in Bulgarian women with systemic lupus erythematosus.....</i>	32
<i>Todorova, L., P. Dimitrova, A. Toncheva and N. Ivanovska. Role of C5 component of the complement in experimental model of arthritis.....</i>	32
<i>Sheytanov, I., Tsv. Petranova, S. Monov, A. Batalov and R. Nestorova. Use of muscle-skeletal ultrasonography in patients with osteoarthritis</i>	33
<i>Shumnalieva, R., M. Kurowska-Stolarska, Zi. Kolarov, R. Rashkov and I. McInnes. Role of microRNA-223 in controlling the inflammasome complexes in synthesis of proinflammatory cytokines.....</i>	33
<i>Yaneva-Bichovska, D. Biosimilars – for and against.....</i>	34

POSTER SESSION

<i>Batalov, A., M. Kazakova, T. Deneva, N. Mateva, Zi. Kolarov and V. Sarafyan. YKL-40 – a new biomarker in rheumatoid arthritis?.....</i>	35
<i>Varbanova, B. and V. Vasileva. A case of BCG osteitis.....</i>	35
<i>Grechenlieva, R. An attempt to compare the effects of the preparations hyalgan, neovisc and erectus for intraarticular application in patients with different stages and localizations of arthrotic disease</i>	36
<i>Grechenlieva, R. Comparison of the effects of Diprophos, Flosteron and Depo-medrol with the effect of large-molecular Triamcinolon acetonid 40 mg in intraarticular and periarticular application in patients with inflammatory diseases of spine and pelvis</i>	36
<i>Dimitrov, Sv., Sv. Hristova, S. Bogdanova, T. Shivacheva and Vi. Kadinov. Analysis of cardiovascular events and evaluation of cardiovascular risk in patients with inflammatory joint diseases, systemic connective tissue diseases and osteoarthritis.....</i>	37
<i>Zdravkova, Ya., R. Rashkov, S. Monov, Tsv. Yoneva and D. Kalinova. Frequency and essence of cognitive impairments in neuro-psychiatric systemic lupus erythematosus in comparison with a control group of healthy individuals</i>	37
<i>Karalilova, R. and A. Batalov. Syndrome of SAPHO and enthesitic changes – ultrasonographic evaluation</i>	38
<i>Karastatev, D., V. Nikolov, K. Petrov and M. Vasileva. Systemic lupus erythematosus and neoplasms – contribution of a case.....</i>	38
<i>Lambova, S. and U. Müller-Ladner. Specificity of capillaroscopic changes in rheumatic diseases – a comparison with microvascular changes in the socially significant diseases arterial hypertension and diabetes mellitus.....</i>	39

<i>Marincheva, S. and R. Stoilov.</i> Sensitivity and specificity of the criteria ACR 1987 and ACR/EULAR 2010 for diagnosis of early rheumatoid arthritis	40
<i>Marincheva, S., R. Stoilov and R. Rashkov.</i> Rheumatoid arthritis with acute onset and aggressive course with multiple rheumatoid nodes in the lungs.....	40
<i>Milanova, V., A. Toncheva, N. Ivanovska and P. Dimitrova.</i> Biologic effects of IL-17 on neutrophil functions of arthritic and healthy mice	41
<i>Mihaylova, D., L. Raycheva, V. Kaleva, M. Krumov and I. Tsocheva.</i> Pulmonary hemorrhage in a child with systemic lupus erythematosus	41
<i>Pavlova, P., S. Marincheva and Zl. Kolarov.</i> A new look at pathogenesis of the gout as an autoinflammatory disease.....	42
<i>Sapundzhiev, L. and A. Batalov.</i> Accuracy of arthrocentesis of the hip joint performed by blind approach through use of anatomic bone features and echographic and fluoroscopic quided arthrocentesis in different stages of the disease	42
<i>Staykova, N., M. Geneva, St. Alimanska and T. Simeonova.</i> One-year follow up of clinical, roentgenologic and functional changes in patients with rheumatoid arthritis refractory to therapy with methotrexate, treated with adalimumab (Humira).....	43
<i>Staykova, N., St. Alimanska, M. Murdzheva and V. Alimanska.</i> Prognostic model of the roentgenologic disorders in early rheumatoid arthritis – a 3-year study	44
<i>Stefanov, St.</i> PFAPA syndrome – contribution of two cases.....	44
<i>Techarova, A., B. Petkova and M. Ganeva.</i> Wegener’s granulomatosis – two cases in adolescents	45
<i>Todorov, P. and A. Batalov.</i> Comparison between corticosteroid injection into sacroiliac joints – blind or ultrasound guided – in patients with spondyloarthritis.....	45
<i>Shumnalieva, R., D. Baxter and McInnes.</i> A clinical case of hyper-IgG4 disease	46

REVIEWS

<i>V. Milanova, A. Toncheva, N. Ivanovska and P. Dimitrova.</i> The significance of animal models of rheumatoid arthritis	47
<i>Tzv. Petranova and I. Sheytanov.</i> Treatment of rheumatoid arthritis from the patient perspective	54

ORIGINAL ARTICLES

<i>D. Tanev, R. Robeva, S. Andonova, M. Nikolova, M. Stoycheva, A. Tomova, Ph. Kumanov, A. Savov, R. Rashkov and Zl. Kolarov.</i> Systemic lupus erythematosus and estrogen receptor polymorphism in Bulgarian women	59
<i>V. Reshkova, R. Rashkov and I. Milanov.</i> Evaluation of the dependence of pain threshold on serum concentration of the neuromediators adrenaline, noradrenaline and serotonin in patients with fibromyalgia (positive for IgG Epstein-Barr virus).....	65