

REVIEWS

AFLAMIL – NSAID WITH A GOOD SAFETY PROFILE AND EFFICACY

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Summary. The most important and basic symptom that brings the patient to the rheumatologist is pain. In other cases, the rheumatic diseased patient manifests symptoms or syndromes, reflecting local and/or systemic inflammation, while typically, both types of complaints are presented. This explains why non-steroidal anti-inflammatory drugs (NSAIDs), including Aceclofenac (Aflamil), are among the most frequently used drugs in rheumatologic practice. On the other hand, the use of NSAID is associated with the development of a number of drug-related adverse events (AE). The most significant class-specific serious AEs are NSAID-associated gastric damages and the impact of NSAID on the cardiovascular system. These two groups AEs are the main driving force that pushes the development of new agents NSAID. Aceclofenac stands out of the NSAID with a good safety profile and efficacy. Data on the class-specific AE of NSAID, pharmacokinetics and pharmacodynamics, and results from clinical trials evaluating the safety and efficacy profile of Aceclofenac are presented in this article.

Key words: NSAID, Aflamil, safety profile, efficacy

OPIOID ANALGESICS VERSUS NONSTEROIDAL ANTIINFLAMMATORY DRUGS: USE IN RHEUMATIC DISEASE-RELATED PAIN MANAGEMENT

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Summary. Pain is a universal disease symptom. It is one of the factors that determines the quality of life and the well-being of the individual. Pain management is a key goal in treating any form of disease. The most commonly used pain-managing substances are the NSAIDs, including the COX2 inhibitors. The opioid analgesics are more rarely used due to the likelihood of developing tolerance-building and addiction to the medications. In contrast to opioids, NSAIDs do not suppress the respiratory center and do not cause euphoria and drug addiction, which makes them first-choice medications for treating pain symptoms in inflammatory and degenerative diseases. Contemporary concepts emphasize on treatment of acute and chronic pain by all possible means, including opioid substances. This makes us pose the question, “When is the right time to start using opioid analgesics and how long should the therapy last?”

Key words: pain, treatment, NSAIDs, opioid analgesics, tolerance, drug addiction

CELL AND MOLECULAR BONE STRUCTURE. LABORATORY MARKERS

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Summary. The main bone unit is made up of osteoblasts, osteocytes and osteoclasts. The osteoblasts produce osteoid, consisted of collagen and non-collagen matrix proteins. These cells express variety of receptors and adhesion molecules that are coupled with signaling pathways, responsible for cell activation, proliferation and apoptosis. Osteoblasts produce hormones, growth factors and cytokines. Osteocytes represent 90% of all bone cells in adults. They are terminally differentiated cells and possess a lot of dendrites, through which the communications with other bone cells is realized. Osteoclasts descend from the monocyte stem cells, possess phagocyte properties and are responsible for bone resorption. The organic bone matrix consists of collagen type 1 and non-collagen proteins. The non-organic matrix is made up of calcium salts in the form of hydroxiapatite. The bone cells participate not only in bone structure and remodeling processes but also in energy metabolism, mineral homeostasis and immune function. The considerable progress in the knowledge of cell and molecular structure of the bone provides the medical specialists with a number of reliable laboratory markers of bone formation and resorption. Parallel with the examination of bone markers, a variety of biochemical hematological and hormonal tests are performed.

Key words: osteoblasts, osteoclasts, osteocytes, bone remodeling, laboratory markers

NEW TRENDS IN THE LABORATORY DIAGNOSIS OF OSTEOARTHRITIS

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Summary. Osteoarthritis (OA) is the most common chronic joint disease which is the main reason for disability in the elderly. There are many unsolved problems concerning the diagnosis, progression of the disease and treatment. These attract the attention of the scientists and make OA one of the most investigated fields in rheumatology. Biomechanical factors and genetic predisposition participate in the development of OA, as well as the subchondral bone, cytokines and protein kinases. Searching for genetic markers that may predict the onset and development of OA is the main goal of laboratory investigations. The scientists study the role of biomechanical factors that change cartilage metabolism and expression of cytokines and chondrolytic factors. They look for reliable laboratory markers, which are positive before the radiological signs of OA. The introduction of new biomarkers will facilitate the diagnosis, as well as the evaluation of OA activity and progression. It will contribute to more effective therapy directed to the main causes for the onset of pathological processes.

Key words: osteoarthritis, genetic and biochemical markers, laboratory programs

PLATELET ACTIVITY AND RHEUMATIC DISEASES

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Summary. Platelet activity is an actual biomarker in the monitoring of cell stimulation in rheumatic diseases (SLE, RA, SS). Platelet mediators take part in the pathogenesis of systemic vasculitides. Through a number of factors (e.g., thrombin-factor IIa), platelet activation plays a key role in the pathophysiological mechanism of the inflammatory joint diseases.

Key words: platelet activation, SLE, RA, SS

ORIGINAL ARTICLES

COMPARISON OF TWO ELISA METHODS (ANTI-CCP2 AND ANTI-MCV) FOR THE DETECTION OF ANTIBODIES AGAINST CITRULLINATED PEPTIDES

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Summary. Antibodies directed against citrullinated peptides (ACPA) play an important role in the pathogenesis of rheumatoid arthritis (RA) and are a part of the criteria, recommended by the EULAR. The aim of this study was to compare the diagnostic values of two commercially available assays – second generation anti-cyclic citrullinated peptide (CCP2) antibodies ELISA (Axis Shield) and genetically modified citrullinated vimentin (anti-MCV) automated ELISA system, „Alegria” (Orgentec). Sixty five patients were distributed in 3 groups: the first group included patients with RA; the second group – these with RA and other overlap diseases; and the third group, patients with other arthropathies (ankylosing spondylitis, osteoarthritis and podagra); 20 healthy individuals (control group) were tested to determine the frequency, sensitivity, specificity, positive (PPV) and negative predictive values (NPV) of both tests. The highest frequencies of anti-MCV and anti-CCP2 antibodies were observed in the RA patients: 92.86% and 73.81% respectively. The frequency was lower in the patients with other arthropathies. In the control healthy group, the ACPA was not detected. The results showed higher diagnostic sensibility for anti-MCV in comparison with anti-CCP2 in all tested groups. Differences between the two methods were only found in the detection of low concentrations of antibodies, mainly in the group of non-RA patients. PPV in both tests was 100%. NPV was higher in anti-MCV than anti-CCP2. In conclusion, our results have showed that the measurement of serum anti-MCV level as a marker is useful and more sensitive for the diagnosis of RA than anti-CCP2, but the combined use of anti-MCV and anti-CCP2 may serve as a better prognostic factor than either method alone.

Key words: rheumatoid arthritis, anti-CCP2, anti-MCV

EFFICACY AND SAFETY OF GUNA MD INJECTION COLLAGEN IN THE TREATMENT OF GONARTHROSIS

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Summary. Collagen is the most abundant protein (structural protein-tissue; molecular weight 300 KDa) in the mammalian organism, accounting for about 5-6% of the human adult's body weight. A new substantial and refined approach to painful dysfunctional pathologies of the musculoskeletal system and related motor dysfunctions is proposed now by Guna Medical Devices for use in clinical practice and specialized facilities. Guna Medical Devices contain collagen and ancillary substances of natural origin. Thirty patients with gonarthrosis of II X-ray stage were monitored for a 3-month period and re-examined after 8-week administration of GUNA-MD KNEE + GUNA MD MUSCLE injections. The patients were evaluated by using a questionnaire of pain and functional index of Lequesne before and after the treatment. Intra-articular application of GUNA-MD in gonarthrosis has been shown to improve significantly pain at rest and while moving, as well as the functional activity of the patients.

Key words: collagen injection (GUNA-MD), gonarthrosis

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