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REVIEWS

TRAINING IN RHEUMATOLOGY

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Summary. Rheumatology training programs proceed at different levels in the preparation of physicians. These start in the university and continue as various forms of postgraduate training. They are addressed to both the general practitioners (GPs) – the key figures in the diagnosis and treatment of rheumatic diseases, and rheumatology health professionals. Inadequate management of diseases is closely linked to the training level of the doctors who manage them. The findings of global studies show that the training in Rheumatology at the university level and targeted educational programs for GPs are insufficient, considering the high prevalence and social impact of these diseases.

Key words: training, educational programs, rheumatology

THEORETICAL FOUNDATIONS AND IMPORTANCE OF PHARMACOECONOMIC ANALYSES IN RHEUMATOLOGICAL PRACTICE

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Summary. Pharmacoeconomics as a sub-discipline of healthcare economics is in its nature the application of economics analysis to the use of medicinal products, services and programs, focusing on the expenses and the results of such use. The outcomes are directly related to measurement of medical, economic and social aspects of the use of such medicines. Due to the different results of each medicine therapy, a number of economic evaluation methods are developed for its economic assessment. The fundamental pharmacoeconomic methods of evaluation are: cost–minimization; cost – effectiveness; cost–benefit, and cost–utility. On a basic level they are double comparative analyses of competing therapies in relation to their costs and results. The main goal of the analyses is to facilitate decision making process identifying the proper therapeutic, managerial or financial decision. This paper discusses the possibilities and benefits of pharmacoeconomic methods application in rheumatoid arthritis therapy based on the review of scientific publications in this field.
LUMBAR SPINE PAIN

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Summary. Regional pain syndromes are characterized by pain affecting a single musculoskeletal area. Questioning and examination will allow for the distinction of four main origins: the periarticular, joint, neurogenic and referred pains. The most common patterns of neurogenic pain are sciatica. This is a complication of spondylosis and chronic lower back pain, including herniated disks. Lower back pain is extremely common in medical practice. In the chronic low back and radicular pains, both the nociceptive and neuropathic components are effective; in other words, it is a mixed type of pain. In the large-scale study, the causes of cervical radiculopathy were found to be disc protrusion in 21.9% of patients, and spondylosis and disc protrusion combined – in 88.4%.

Key words: low back pain, etiology, treatment

FIBROMYALGIA SYNDROME IN OUTPATIENT PRACTICE

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Summary. Fibromyalgia syndrome (FMS) is a serious interdisciplinary medical problem that recently attracts increased attention. In the USA, 3.7 million patients were diagnosed, or about 2% of the population. The costs for this nosology are more indirect and intangible and related to the social adaptation of patients and individual problems. FMS in Bulgaria is a common but rarely diagnosed disease. This problem should be drawn to the attention of medical professionals and particularly general practitioners. This review analyzes publications related to the diagnosis, treatment and rehabilitation programs for patients with FMS in outpatient practice.

Key words: fibromyalgia syndrome, outpatient practice

ORIGINAL ARTICLES

DISPENSARY OBSERVATION OF RHEUMATOLOGIC PATIENTS IN BULGARIA

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Summary. Dispensary observation of rheumatic patients is an important and responsible process, as it is associated with the aggressiveness of rheumatic diseases, their tendency to relapses and subsequent severe disability of patients. Characteristics of various autoimmune nosological entities require regular meetings of outpatients with treating rheumatologist, permanent laboratory and X-ray control. This holds true also for degenerative joint diseases. Dispensary observation of these patients has existed since the 50-s of the 20 century and before the implementation of health reform in 2000 it was carried out by district doctors. Currently, Directive on preventive examinations and dispensary № 39 of 16 November 2004 of the Ministry of Health is in force, which is updated with the adoption of the National Framework Agreement every year. This article analyzes the dispensary observation of rheumatic patients in Bulgaria in the period 2006-2011, discussing the fundamental problems of its implementation.

Key words: dispensary observation, rheumatologic diseases

ELEVATED SERUM LEVELS OF IL-18 IN PATIENTS WITH RHEUMATOID ARTHRITIS AND ANKYLOSING SPONDYLITIS
Summary. Rheumatoid arthritis (RA) and ankylosing spondylitis (AS) are all examples of rheumatic diseases, in which chronic inflammation is associated with pathology of the peripheral joints or axial skeleton. Although the mechanisms of bone remodeling in inflammatory joint diseases show some similarities, a unique effect on the subchondral bone or axial skeleton is present in either of the two conditions. In the two diseases, the activated immune cells into inflammatory lesions produce broad spectrum of cytokines. They are involved in the initiation and maintenance of chronic inflammation. The aim of this study was to investigate the role of IL-18 in the disease process in rheumatoid arthritis and ankylosing spondylitis, while adjusting for age, sex and disease duration. An ELISA test was used to determine serum cytokine IL-18 levels in 77 patients with AS and 53 patients with RA. Results were compared with those from 54 healthy controls. We also investigated the influence of age, gender and duration of the disease on the serum concentration of IL-18 in each of the groups by univariate and multivariate analyses (analysis of covariance – general linear model). Both in the patients with AS (420.54 ± 218.4 pg/ml) and in those with RA (315.94 ± 173.75 pg/ml) were measured statistically significantly higher levels of serum IL-18 in comparison with the healthy controls (149.6 ± 134.2 pg/ml; p < 0.001). We detected higher levels of IL-18 in the serum in AS compared to RA (p = 0.002). Gender, age and duration of the disease have no measurable and statistically significant effect on the serum level of IL-18. Our study demonstrated significantly higher levels of serum IL-18 in patients with RA and AS compared to healthy subjects and clearly showed the higher concentrations of this cytokine in the serum in AS compared to RA.

Key words: ankylosing spondylitis, rheumatoid arthritis, IL-18

DIAGNOSTIC POSSIBILITIES OF MUSCULOSKELETAL SONOGRAPHY IN GOUT – OUR EXPERIENCE

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Summary. In the past decade, Ultrasound (US) became an essential diagnostic tool for imaging of musculoskeletal diseases. The technological advance with the development of high-frequency transducers, the possibilities of color/power Doppler examination and extended field of view function contributed to the progressive development of this method. In this review, we will present the diagnostic possibilities of musculoskeletal sonography in the evaluation of pathological changes occurring in joints and periarticular soft tissues in patients suffering from gout. They can be divided into two major groups – non-specific signs of inflammation and such giving direct view of the crystal deposits. Sonographic diagnosis is non-specific in the early stages of the disease and shows only the presence of synovial effusion. The typical pathomorphological changes occurring in joints can be identified with the disease progression: deposition of monosodium urate crystals on the surface of the cartilage, the so-called ‘double contour sign’, tophaceous deposits, and development of bone erosions. In conclusion, we recommend that US must be regularly used in the everyday clinical practice of rheumatologists for diagnosis and therapeutic response monitoring in patients with gout.

Key words: gout, ultrasound, diagnostic possibilities

CASE REPORT

DEVELOPMENT OF COMMON VARIABLE IMMUNE DEFICIENCY IN A PATIENT WITH SYSTEMIC LUPUS ERYTHEMATOSUS

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Summary. Common variable immunodeficiency (CVID) is defined by a severe lack of immunoglobulins and variable T-cell dysfunction. In contrast, systemic lupus erythematosus (SLE) is characterized by high levels of immunoglobulins and autoreactive antibodies. Despite these two seemingly polar extremes of immune reactivity the common feature is dysregulation of the immune
response. This report describes a young 35-year-old woman who developed SLE at the age of 14. Twelve years thereafter a conversion took place from hypergammaglobulinemia to hypogammaglobulinemia associated with recurrent infections and CVID diagnosis was proposed. Transition from one state to the other is clearly unusual and deserves detailed clinical and scientific investigation. Whether these two entities just coexist or CVID is a complication of SLE or is caused by the immunosuppressive treatment, are questions broadly discussed in the present case report.

**Key words:** systemic lupus erythematosus, common variable immunodeficiency