Volume 3, Issue 1, January 2025 ISSN (E): 2938-3765

THE ROLE OF THE THERAPIST IN THE EARLY DIAGNOSIS OF RHEUMATOID ARTHRITIS

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Abstract
Rheumatoid arthritis (RA) is a chronic inflammatory disease of the joints of unknown etiology, which has a varied clinical course and is characterized by progressive destruction of synovial joints, accompanied by degradation of cartilage and bone, with possible spread outside the musculoskeletal system. The peak onset of rheumatoid arthritis occurs between 45 and 65 years of age. Women are susceptible to this disease 2-3 times more often than men. Rheumatoid arthritis continues to be one of the most pressing pathologies in modern medical practice: on the one hand, this is facilitated by the prevalence of the disease - up to 2% in the general population; on the other hand, the high social and economic significance of the process, based on high rates of permanent disability in patients and the significant cost of treatment and necessary laboratory monitoring.

Keywords: Early rheumatoid arthritis, rheumatoid factor, diagnostic criteria.

Introduction

Purpose of the study: To determine the early development of a typical clinical and laboratory picture and the most common manifestations of rheumatoid arthritis (RA) at the onset of the disease and to determine the duration of the diagnosis of RA from the onset of the disease.

Relevance: Rheumatoid arthritis (RA) is a chronic inflammatory autoimmune disease of connective tissue, which primarily affects peripheral joints with the development of erosive and destructive changes in them. Inflammation in rheumatoid arthritis affects the synovium of the joint, leading to hyperplasia of synovial tissue that destroys articular cartilage and underlying subchondral bone. According to modern concepts, the development of rheumatoid arthritis is based on a generalized defect in immunoregulatory mechanisms that determine the development of cellular and humoral reactions. This leads to chronic, progressive inflammation, affecting not only the joints, but also various organs and systems [1]. Rheumatoid arthritis is the most common inflammatory disease of the joints, the prevalence of which in the population is about 1%, and the economic losses from RA for society are comparable to those from coronary heart disease. There are a number of reasons behind the high medical and social significance of rheumatoid arthritis. Chronic pain, progression of joint destruction and dysfunction of the musculoskeletal system lead to a deterioration in the quality of life and early disability [2]. The causes of the disease are unknown to this day. Indirect data, such as an increase in the number of leukocytes in the blood and eryurocyte sedimentation rate (ESR), indicate the infectious nature of the process. Believing

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that the disease develops as a result of an infection that causes a disorder of the immune system in hereditarily predisposed individuals; in this case, immune complexes are formed (from antibodies, viruses and others), which are deposited in tissues and lead to joint damage [3]. The disease is characterized by high disability (70%), which occurs quite early. The main causes of death of this disease are infectious complications and renal failure. It may first appear after heavy physical exertion, emotional shock, fatigue, during a period of hormonal changes, exposure to adverse factors or infection [3,4]. According to statistics, more than 20 million people suffer from RA in the world. About 2/3 of RA patients are disabled by the 10th year of the disease and have severe functional impairments and limitations in everyday life. The peak incidence of RA occurs in the interval from 30 to 45 years, which coincides with the most active period of working life [4]. The importance of timely and correct diagnosis of RA, distinguishing it from reactive arthritis and other joint diseases cannot be overestimated, since the correct tactics at the onset of the disease determine the nature of the course of arthritis, the progression of joint destruction and functional insufficiency of the joints. In clinical practice, late diagnosis of RA often occurs, which predetermines late prescription of disease-modifying drugs and contributes to the formation of resistant forms of the disease. In recent years, a new concept for the management of patients with a suspected or established diagnosis of RA has emerged. This position is dictated by the fact that in the earliest period of RA, when the process is in the primary exudative phase, the reversibility of joint inflammation is much higher, since pannus has not yet formed - uncontrolled proliferation of the synovial membrane, destroying the underlying cartilage and bone. In addition, influencing the immunopathological process with the help of disease-modifying drugs at an early stage of the disease is quite effective in blocking autoimmune reactions [5]. Early diagnosis of rheumatoid arthritis is very important for the correct selection of therapy and the prescription of basic medications that will prevent the development of irreversible changes in this disease. There are objective difficulties in diagnosing RA at its onset (characteristic laboratory changes may be absent, the most characteristic joints may be affected [6]. Diagnosing RA at its onset is a very difficult task. Its symptoms are often nonspecific and can be observed in a wide range of both rheumatic and non-rheumatic diseases. Therefore, special knowledge and skills are required to make a timely diagnosis using clinical, laboratory and instrumental research methods. General practitioners, pediatricians, and outpatient physicians do not have sufficient knowledge of these skills. A number of studies have been conducted in Canada, the UK and the USA, which have shown that general practitioners provide insufficient quality care to patients with RA, and students and interns have an insufficient level of training in rheumatology problems, which is associated with a shortage of training hours during university education. Thus, in Canada, in real clinical practice, only 27% of 10 thousand patients with suspected RA registered with general practitioners are consulted by rheumatologists [7]. Over the past decades, treatment options for rheumatoid arthritis have expanded significantly and treatment strategies have improved [8]. Rheumatoid arthritis continues to remain one of the most pressing pathologies in modern medical practice: on the one hand, this is facilitated by the prevalence of the disease - up to 2% in the general population; on the other hand, the high social and economic significance of the process, based on high rates of permanent disability in patients and the significant cost of treatment and necessary laboratory monitoring. The high prevalence of the disease implies the presence of concomitant pathologies

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in such patients and, accordingly, a burdened comorbid background, which has a significant impact on the prognosis, treatment tactics and, as a result, the quality of life of patients with rheumatoid arthritis [9]. RA is the central problem of modern rheumatology, which is explained primarily by its significant and widespread prevalence, the affection of people predominantly of working age, the steady progression of the disease, leading to a decrease in the quality of life and, ultimately, disability. The prevalence of RA among the adult population of various climatic and geographical zones averages 0.6-1.3%. [10]. Over the past 15 years, rheumatologists have developed fundamentally new approaches to the treatment of rheumatoid arthritis (RA), which has significantly improved the level of medical care for patients. Based on numerous clinical studies, it has been convincingly shown that early initiation of therapy is more effective in curbing disease progression and preventing the development of functional impairment than later initiation of treatment [3–6]. Therefore, in many countries of Western Europe, the USA, as well as in Russia, specialized "Early Arthritis Clinics" were created [10, 11]. The first step towards being able to diagnose RA as early as possible was taken in 2010, when new classification criteria for RA were published. However, the diagnosis of RA in accordance with these criteria is established in the presence of polyarthritis in combination with the results of laboratory tests. Back in 2002, simplified criteria for early RA were proposed, which were included in national recommendations for the management of patients with RA if the patient has at least 3 inflamed joints of a certain localization (small joints of the hands and feet), morning stiffness and a positive "transverse compression" test of the patient should be immediately referred to a rheumatologist [11].

Materials and methods of research:

69 patients aged 19-44 years were observed for 6 months, who, after examination, were diagnosed with RA in the first 6 months of the disease. The first signs were taken to be the morning appearance and feeling of stiffness, and during the day - fatigue, malaise, and exudative changes in the joints.

Results:

During dynamic observation, the nature of each sign was assessed and the diagnosis of RA was confirmed in 37 patients (53.6%). The duration of the period from the onset of the disease to the diagnosis of RA was also analyzed depending on the doctor's specialization. The most significant indicators in terms of frequency in the first month of the disease were: morning stiffness, high CRP (2+ or more). The increase in ESR and C-reactive protein was more pronounced only in 21 patients (30.4%). Increased rheumatoid factor in 21 patients (30.4%). In all patients, generalization of the articular syndrome (involvement of more than 3 joints) occurred by the 6th month of the disease. The onset of the disease with monoarthritis was noted in 7 (10.1%), and polyarthritis in 52 patients (75.3%). Thus, the patients included in our study were distinguished by the early development of the typical clinical and laboratory picture of RA. One of the first manifestations of the disease, even in the absence of significant inflammatory changes in the joints, was morning stiffness, which was noted by 85.5% of patients already in the first month of the disease.

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Conclusions:

The most significant manifestations of the early stage of RA in terms of frequency were: morning stiffness, positive RF, increased CRP, symmetrical nature of arthritis, damage to small joints of the hands and feet. An important aspect of diagnosing RA is early recognition of the disease, since early adequate therapy is most effective. The early stage of RA is characterized by maximum joint inflammation with the rapid appearance of bone erosions [12]. Therefore, stopping inflammation in the early phase of the disease allows you to slow down the progression of articular pathology, and also prevents the development of extra-articular manifestations and complications of the disease, including. such severe ones as amyloidosis, aseptic necrosis of joints, etc. [10]. Diagnosing RA at its onset is a very difficult task. Its symptoms are often nonspecific and can occur in a wide range of both rheumatic and non-rheumatic diseases. Therefore, special knowledge and skills are required to make a timely diagnosis using clinical, laboratory and instrumental research methods. General practitioners, pediatricians, and outpatient physicians do not have sufficient knowledge of these skills. In the UK, the time it takes from a RA patient to see a GP before being referred to a rheumatologist has increased in recent years from 9 to 12 weeks. This delay is the main reason for late diagnosis [11]. As is known, the diagnosis of RA is established in accordance with the criteria of the American Rheumatological Association. The presence of 4 criteria out of 7 allows us to consider the diagnosis of RA reliable. However, in the early stages of the disease, specific signs of RA are not always present. With reliable RA, the sensitivity of the criteria is 91-94%, and the specificity is 89%. Often in clinical practice, cases arise when the same patient at different periods of the disease may or may not meet the criteria of the American Rheumatological Association.

As for the possibility of using the American Rheumatological Association criteria for diagnosing RA in the early stages, while the specificity is quite high (78-87%), the sensitivity of these criteria is extremely low (26-47%), which makes them unsuitable for diagnosing the onset of RA [5, 11]. In 2010, the American College of Rheumatology (ACR) and the European League Against Rheumatism (EULAR) developed new criteria for diagnosing RA, allowing this diagnosis to be made at an earlier stage. But, despite modern advances in the study of this disease, diagnosis in the early stages of RA still faces difficulties [5, 13]. The goal of therapy in newly diagnosed rheumatoid arthritis is to assess the activity of the disease, select basic anti-inflammatory therapy depending on the available data from instrumental and laboratory examinations, and concomitant diseases. Diagnosis of rheumatoid arthritis, like the diagnosis of most other autoimmune diseases, is based on a set of characteristic clinical symptoms, laboratory and instrumental research data [12,14]. Instrumental diagnosis of rheumatoid arthritis is carried out using radiography of the hands and feet, magnetic resonance imaging and ultrasound, which makes it possible to detect erosion in the early stages of rheumatoid arthritis. It is the presence of erosive arthritis that is one of the most important factors for an unfavorable prognosis in rheumatoid arthritis and an indication for choosing a more active treatment regimen. A blood test examines ESR, rheumatoid factor (rheumatic factor), and platelet count. The most advanced analysis is the titer of antibodies to the cyclic citrulline-containing peptide Anti-CCP, and this indicator is an important factor in the persistence of inflammation and, therefore, an important prognostic factor that can be useful in choosing therapy. An increase in titers of both RF and anti-CCP allows diagnosing RA with higher

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sensitivity and specificity than an increase in the level of each of these indicators separately. Anti-CCP antibodies are a more specific marker of RA than the RF level. Their determination allows for differential diagnosis, as well as predicting the risk of developing joint destruction in patients with early RA [3,12, 14]. In conclusion, it must be emphasized that the diagnosis of early RA requires confirmation by data from modern highly sensitive research methods: magnetic resonance imaging, ultrasonography of joints, as well as the determination of specific immunological markers of RA - antibodies to cyclic citrullinated peptide and modified citrullinated vimentin [5,14]. An important aspect of diagnosing RA is early recognition of the disease, since early adequate therapy is most effective.

Thus, a healthy lifestyle with regular physical activity and a balanced diet, follow-up treatment of all infectious diseases, regular medical examinations and timely diagnosis of rheumatoid arthritis are good prerequisites for preventive measures and for reducing the risk of developing rheumatoid arthritis and its complications.

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