

APPLICATION PHYSIOTHERAPY IN REHABILITATION RHEUMATOID ARTHRITIS

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Abstract

Background: Rheumatoid arthritis is one of the most common forms of inflammatory diseases of the joints. The disease leads to deformation, then to destruction of the diseased joint and to disability. Physiotherapy is used for the treatment and rehabilitation of rheumatoid arthritis. It is assumed that physiotherapy treatments that promote remission of the disease, improve the quality of patients' life, create the necessary conditions for comprehensive rehabilitation programs.

Objective: Systematic's review conducting of studies that assess the effect of physiotherapy in the rehabilitation of patients with rheumatoid arthritis.

Methods: Theoretical analysis of scientific and methodical literature, methods of analysis, synthesis, generalization.

Results: To reduce inflammation in the joints is performed UV of affected joints weak or medium erythermal or middle erythermal doses

used UHF therapy. UHF-therapy prescribed to the area of joint in I or II dose, duration 10 min., the course – 5-8 treatments.

For patients with minimal activity is added electrophoresis NSAIDs. Electrophoresis aspirin is applied on the affected joints (every day, the course – 10-12 procedures), which favorably affect the course of rheumatoid arthritis.

Conclusions: Physical therapy can reduce pain and stiffness in the joints, prevent deformity and restore function, improve independence and quality of life. State of the art is a major incentive to develop new activities in the treatment and rehabilitation of patients with rheumatoid arthritis to improve joint functional activity and their physical health.

Keywords: rheumatoid arthritis, physiotherapy, rehabilitation, hydrotherapy.

Introduction

Rheumatoid arthritis – is an autoimmune disease that can develop in people of any age. The causes of rheumatoid arthritis are not well-known. Symptoms of rheumatoid arthritis include: fatigue, stiffness in the joints after rest, swelling in the affected joints. In some cases, arthritis may occur long asymptomatic [17].

When rheumatoid arthritis is not treated, it leads to deformation, and then to destroying of diseased joint, loosing of working ability and disability [6].

Rheumatoid arthritis – a chronic disease, occurring with periods of exacerbation and remission. Treatment of the disease is aimed at

extending the period of remission, alleviation of symptoms, prevention of disability and improving quality of life [19, 23].

Physiotherapy is an integral part of a comprehensive treatment of patients with rheumatoid arthritis and their rehabilitation [7, 9].

The advantages of physical treatments are saving and absence of side reactions at the correct dosage. Physiotherapy has broad opportunities of differentiated application depending on the clinical form of the disease, its flow characteristics, the nature of the changes in the joints, the degree of inflammatory activity, the severity of contractures, and the nature of accompanying pathology [1, 10].

However, the mechanism of action of physical factors in rheumatoid arthritis complicated and still is not enough studied. Therefore, it is important to find out the features of the course of rheumatoid arthritis and to prove the possibility of using methods of physical therapy in the complex treatment and rehabilitation of patients with rheumatoid arthritis in the stationary phase.

Methods

Literature search

The aim of the research is to summarize the theoretical and practical experience in the application of methods of physical therapy in rheumatoid arthritis.

Purpose determines the following *tasks*:

- to examine the theoretical and methodological aspects on treatment and physical rehabilitation in rheumatoid arthritis.

- to analyze the main objectives, methods of physical therapy in rheumatoid arthritis and their therapeutic effects on the body of the patient.

Methods: theoretical analysis of scientific and methodical literature, methods of analysis, synthesis, generalization.

Results

A comprehensive, phased approach in the treatment of rheumatoid arthritis, including medication and non-drug therapies can lead to remission, improving health and quality of patient's life [18].

Among the medical and rehabilitation facilities occupy a leading position have physiotherapy and kinesitherapy means. There is clinical evidence of the successful application of methods of physical therapy at different stages of rheumatoid arthritis [20].

Physiotherapy on stationary phase begins from methods that help reduce inflammation in the joints. For this purpose, there are conducting, UV of affected joints weak or medium erythermal or middle erythermal doses used UHF therapy. With a high degree of disease activity, it is using UV-irradiation that have anti-inflammatory, hyposensitization, analgesic effect. There are irradiated locally affected joints (shoulder, hips, ranging from 3-4 biodoza, elbow, knee – with a 6-7 biodoza, hands, foots – from 7-8 biodoza, then increase to 1-2 biodoses, each joint 3-4 exposure) and alternately reflex zones [9].

UHF-therapy prescribed to the area of joint in I or II dose, duration 10 min., the course – 5-8 treatments [2].

As process of progress subsiding also is adding sollux, light to the area of a thermal bath joints. In order to stimulate the adrenal, it is spending inductothermy of adrenal glands. Patients with contraindications to this treatment (concomitant coronary heart disease, hyperthyroidism, cerebrovascular blood supplying, visceral manifestations of rheumatoid arthritis) – UHF-therapy or electrosleep [10].

For patients with minimal activity is added electrophoresis NSAIDs, analgesics and mixtures thereof, amplipuls therapy, ultrasound, phonophoresis steroids and nonsteroidal drugs topically to affected joints [3].

Electrophoresis of drugs used in all degrees of disease activity and anti-inflammatory, hyposensitization, analgesic effect a novocaine electrophoresis, calcium, aspirin. Electrophoresis aspirin is applied on the affected joints (every day, the course – 10-12 procedures), which favorably affect the course of rheumatoid arthritis, improves the general condition of patients, reduces pain, and exudative inflammation in the joints, improves the immunological processes and the normalization of blood biochemical parameters [11].

We also recommend electrophoresis cytostatic – Leykerana 5 mg of drug is injected from negative electrode for transverse technique on the affected joints. Duration of procedure – 15-20 min., the course – 15-20 procedures [6].

The effectiveness of the treatment of rheumatoid arthritis increases application of inductothermy. This positive clinical effect is accompanied by a decrease in activity of the process parameters (ESR, CRP) [12], reduced the normalization of noradrenaline significantly reduced autoimmune disorders [13].

Diadynamic (with transverse electrodes on the affected joint first impact DN-current for 2 min., then – current straight polarity for 3 min., and reverse polarity – 3 min., 5-7 procedures on diseased joints, the course – to 21 procedures) provides analgesic effect is favorable shift of the autonomic system [5].

Patients with severe rheumatoid arthritis major or minor nerve processes them weakening should appoint electrosleep (10-80 Hz pulse frequency, duration of procedure – 20-60 min., the course – 10-12 procedures) in combination with sodium chloride baths, therapeutic physical training and massage. Patients with severe rheumatoid arthritis weakening of basic nervous processes, increased irritability, sleep disturbance, decreased mental capacity electrosleep (pulse frequency – 5-20 Hz, duration of procedure – 20-30 min., the course – 10-12 procedures)

should combine with sulfide baths (concentration – 100-150 mg / l, 37 ° C, duration – 10-15 min., the course – 10-12), therapeutic physical training and massage [4, 21].

The positive effect is amplipuls therapy, which is conducted by the following method: PN affect the joints, then IF (frequency modulation – 60-100 Hz, depth – 50-100% by 3-5 min., every day, the course – 10 procedures) [14].

Ultrasound therapy is used in middle and low disease activity. It has anti-inflammatory, vasodilator, analgesic and dissolving effect, normalizes vascular permeability and tissue, improves blood and lymph circulation, stimulates regenerative processes. Procedures at ultrasound intensity from 0.2 to 0.6 W / cm² duration 3-10 min., is conducting every other day or every day to about 10 treatment procedures. It is also used aspirin and hydrocortisone phonophoresis. Inclusion in rehabilitation complex ultrasound and phonophoresis of hydrocortisone reduces the activity of rheumatoid process weakens toxic and allergic effects on the liver and thereby improves functional status [2, 22].

Magnetic therapy allows you to heat the joint and surrounding muscles and ligaments in the 2-3 degrees Celsius, even if the joint is at a depth of 9-12 cm from the surface of the body. This procedure improves blood circulation in the affected joint, promotes the resorption of edema and activates repair mechanisms of the joint cartilage. Hydrotherapy is one of the most widely used and valuable assets in physical therapy rehabilitation arthritis. The main physiological effect of hydrotherapy is to improve circulation and reduce pain in the joints. In water, the conditions for using of therapeutic physical training elements that are difficult to fulfill without water [5].

Thus, physical therapy can reduce pain and stiffness in the joints, prevent deformity and restore function, improve independence and quality of life.

Discussion

Rheumatoid arthritis is one of the widest spreading forms of inflammatory diseases of the joints [15]. The disease significantly reduces the quality of life, as result it reduce to considerable costs on health and has a negative effect on the national economy [19].

According to the Department of Medical Statistics of the Ministry of Health in 2013, the prevalence of rheumatoid arthritis in absolute terms amounted to 115,515 patients (including more than 49 420 – people of working age), and the incidence – 4069 people. This is due to the fact that are insufficient preventive measures that aimed at early detection of disease. Also is very slow introduction of modern methods of diagnosis and treatment of rheumatoid arthritis, insufficient medical supplies and equipment [8, 16].

Wide spreading in the treatment of rheumatoid arthritis received physiotherapy methods.

Scientists notified that physical therapy treatments are applied at different stages of the disease. Resort to physiotherapy is possible only after the disease process subsides: normal temperature, disappearing of pain and returning to normal limits blood parameters [7].

Among the basic physical therapy techniques that are used to treat rheumatoid arthritis, it should be the following: a massage in the joint, phonophoresis, UHF, therapeutic muds, infrared radiation, diathermy, balneotherapy, mineral wax, and paraffin. Very often are appointed several of these methods of physiotherapy effects. Its number should assign a physical therapist, since such procedures have contraindications [4].

Despite on some advances in the treatment of rheumatoid arthritis is still a lot of unresolved issues. Full recovery of patients could not achieve in any other hospital in the world.

Conclusion

At the same time, the available literature revealed little systematic data on the complex combination of means and methods of physical rehabilitation in the rehabilitation of patients with rheumatoid arthritis, there is absent reasonable program of physical rehabilitation.

In summary, today an important issue in rheumatology is comprehensive and individual approach to the treatment of rheumatoid arthritis.

Prospects for further research seen in-depth study on restorative treatment and rehabilitation of patients with rheumatoid arthritis in the hospital.

Conflict of interest

None.

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