



STUDYING THE EFFECT OF VITAMIN D AND CALCIUM PREPARATIONS IN THE TREATMENT OF OSTEOPOROSIS AFTER GLUCOCORTICOSTEROID THERAPY IN RHEUMATOID ARTHRITIS.

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Article history:	Abstract:
Received: January 24 th 2025 Accepted: February 20 th 2025	This article discusses methods for preventing osteoporosis after glucocorticosteroid therapy in rheumatoid arthritis, the results of scientific studies, recommended methods, and directions.
Keywords: rheumatoid arthritis, osteoporosis, glucocorticosteroid therapy, vitamin D3 .	

INTRODUCTION.

Rheumatoid arthritis (RA) is a systemic connective tissue disease of unknown etiology, characterized by small joint damage in the form of an erosive-destructive polyarthritis. It is a common disease, often characterized by high disability at a very early age (70%) (1). The prevalence of RA in the population is 0.5-1.5% (2).

LITERATURE REVIEW.

To date, the main etiological factor causing RA has not been identified. In people with a hereditary predisposition to the disease, various external and internal factors can be observed: infectious diseases, various injuries, psycho-emotional stress, the effects of drugs, hormonal changes (the period of sexual development, after childbirth, the climacteric period, etc.). Recent studies have provided sufficient information about the high importance of hereditary predisposition in the development of RA. In 1949, PS Hench et al. presented data on the first use of glucocorticosteroids (GCs) in RA. Despite significant progress in the development of new methods of early diagnosis in the treatment of RA and the introduction of a wide range of genetically engineered biological drugs, GCs still remain the most important component of pharmacotherapy of this disease in real clinical practice. Epidemiological studies and national registries show that 40-80% of patients with RA at different stages of the disease are prescribed GCs (1). Among the elderly population of developed countries, 0.5-1.0% of patients are systematically taking GCS. Most patients are treated with GCs in short courses, but in 22% of patients, therapy lasts more than 6 months, and in 4% - more than 5 years (3). The number of patients taking GCs for a long time increases with age. According to the results of the study, 0.2% of patients aged 20-29 years and 2.5% of patients aged 70-79 years in the UK were

taking GCs (3). According to modern views, the most unfavorable consequence of long-term GC therapy is osteoporosis. Osteoporosis is a progressive systemic disease of the skeleton, characterized by a decrease in bone mass and structural deterioration. It leads to increased fragility of bone tissue and an increased risk of fractures. Osteoporosis can develop as a secondary process as a result of a primary disease or some other factor. Osteoporosis induced by GCs is the most common form of secondary osteoporosis and the main form of drug-induced osteoporosis. Bone fractures occur in 30-50% of patients taking GCs orally for a long time, and these fractures occur at any daily dose of GCs and in those with low bone mineral density (4). Lifestyle changes, such as quitting smoking and alcohol, exercising, and getting plenty of sunlight, as well as consuming plenty of calcium and vitamin D, are important to reduce the risk of osteoporosis (1).

RESEARCH METHODOLOGY.

The study included 69 patients with RA, 21 (30.4%) of whom were male and 48 (69.6%) were female. Age: 19 to 61 years. The average age of patients is 46.3 ± 2.1 . The diagnosis of rheumatoid arthritis was made based on clinical symptoms and laboratory (detection of rheumatoid factor in the blood) examination results. Taking into account the purpose of the study, all patients were divided into three groups according to gender and age before treatment: group 1 (A) 23 patients, group 2 (B) 23 patients, group 3 (C) 23 patients were included.

Patients in group A patients in the conventional treatment group were prescribed dexamethasone 8 mg per day.

Patients in group B were prescribed vitamin D3 (Aquadetrim) 3000 IU per day and dexamethasone 8 mg per day.



Patients in group C were prescribed 1 tablet of 2 capsules of calcium D3 Nycomed per day and dexamethasone 8 mg per day. The course of treatment lasted 6 months. All patients underwent a complete blood count, blood calcium level and X-ray examination at the beginning of the study, after 1 month and at the end of 6 months of treatment.

CONCLUSION.

In patients in group C, the calcium level in the blood increased to the upper limit of the norm after 6 months of treatment. Previously, it was 1.94 ± 0.2 mmol/l, and then it reached 2.31 ± 0.3 mmol/l. If we analyze the results of R-scopy, we can see that after the treatment, the level of osteoporosis in the bones of patients decreased by 11%. Therefore, based on the above results, it can be concluded that the use of combined calcium and vitamin D3 preparations is highly effective in the prevention and treatment of osteoporosis developing under the influence of corticosteroid drugs used in the treatment of rheumatoid arthritis. In conclusion, it can be said that the following are important in the prevention of osteoporosis after glucocorticosteroid therapy in rheumatoid arthritis: - the use of vitamin D and calcium preparations, fluorides, magnesium, physical exercises, etc.

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