EVALUATION OF OSTEODENSITOMETRY RESULTS IN PATIENTS WITH RHEUMATOID ARTHRITIS

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Annotation

The clinical significance of osteoporosis in rheumatic diseases, especially in patients with rheumatoid arthritis, is that it causes irreversible changes in the osteoarticular system, exudative-proliferative inflammation, ankylosis and pathological fractures, adversely affecting the quality of life of patients and the outcome of the disease. In the department of "Rheumatology" of the Bukhara Regional Multidisciplinary Medical Center, 60 patients with rheumatoid arthritis, who were hospitalized for 6 months, were examined. In patients with RA in the postmenopausal phase, high disease activity was found to have a strong direct correlation with osteopenia and osteoporosis resulting from changes in BMD (bone mineral density).

Keywords: bone mineral density (BMD), rheumatoid arthritis, inflammation, osteopenia, osteoporosis, postmenopause.

REVMATOIDLI ARTRIT BEMORLARDA OSTEODENSITOMETRIYa NATIJALARINI BAHOLASh

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Annotatsiya

Revmatik kasalliklarda, ayniqsa revmatoid artritli bemorlarda osteoporozning klinik ahamiyati shundaki, u osteoartikulyar tizimda qaytarilmas o'zgarishlar, ekssudativ-proliferativ yallig'lanish, ankiloz va patologik yoriqlarni keltirib chiqaradi, bemorlarning hayot sifati va natijalariga salbiy ta'sir qiladi. Buxoro viloyat koʻp tarmoqli tibbiyot markazining "Revmatologiya" boʻlimida 6 oy davomida statsionarda yotgan revmatoid artrit bilan kasallangan 60 nafar bemor tibbiy koʻrikdan oʻtkazildi. Postmenopauzal bosqichda RA bilan og'rigan bemorlarda kasallikning yuqori faolligi SMZ (suyak mineral zichligi) o'zgarishi natijasida osteopeniya va osteoporoz bilan kuchli bevosita bog'liqligi aniqlandi.

Kalit so'zlar: suyak mineral zichligi (SMZ), revmatoid artrit, yallig'lanish, osteopeniya, osteoporoz, postmenopauza.

ОЦЕНКА РЕЗУЛЬТАТЫ ОСТЕОДЕНСИТОМЕТРИИ У БОЛЬНЫХ РЕВМАТОИДНЫМ АРТРИТОМ

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Аннотatsiя

Клиническое значение остеопороза при ревматических заболеваниях, особенно у больных ревматоидным артритом, заключается в том, что он вызывает необратимые изменения в костно-суставной системе, экссудативно-пролиферативное воспаление, анкилозы и патологические переломы, неблагоприятно влияя на качество жизни больных и исход заболевания. В отделении «Ревматологии» Бухарского областного многопрофильного медицинского центра обследовано 60 больных ревматоидным артритом, находившихся на статsiонарном лечении в течение 6 мес. У больных РА в постменопаузный фазы, высоким активностью заболевания было выявлено сильная прямая корреляция с остеопенией и остеопорозом, возникающими в результате изменений МПК (минеральной плотности костей).

Ключевые слова: минеральная плотность костной ткани (МПКТ), ревматоидный артрит, воспаление, остеопения, остеопороз, постменопауза.

Relevance:

Osteoporosis is a secondary metabolic osteopathy in RA, characterized by immunologically impaired bone remodeling, resulting in periarticular and systemic decreases in bone mineral density and increased fracture risk. The study of this problem began at the beginning of the 19th century, from the times of Charcot and Vulpian, who described this disease. And W. Alwens described the clinical presentation of senile osteoporosis in textbooks on internal medicine [2,3,16]. Rheumatological diseases occupy a special place among the diseases that cause secondary osteoporosis. The clinical importance of osteoporosis in rheumatological diseases, especially in patients with rheumatoid arthritis, causes irreversible changes in the bone-joint system, exudative-proliferative inflammation, ankylosis and pathological fractures, which negatively affects the quality of life of patients and the outcome of the disease[8,13]. It should be noted that localized osteoporosis is one of the early symptoms of RA. Joint circumference OP appears before the formation of bone erosion and is considered one of the diagnostic signs of RA. In the first years

after the onset of RA, a generalized distribution of bone mass is observed in addition to the joint circumference [4,6].

In RA, patients of all ages have an increased rate of OP, and according to various studies, it is reported from 4 to 56% [1,5]. Such a difference in reporting of data is due to different methodological studies, different number of patients included in the study, ethnic characteristics of patients and heterogeneity of RA. Thus, the prevalence and medical-social importance of OP in clinical practice today is unquestionable [7,11,12].

Loss of bone mass in rheumatoid arthritis has a local (epiphyseal) and systemic (generalized) character [9,14]. Epiphyseal osteoporosis is one of the earliest diagnostic criteria of rheumatoid arthritis[10,15]. Until now, factors affecting autoimmune diseases and osteoporosis have not been sufficiently studied among scientific researches.

The purpose of the work: to study the frequency of osteoporosis and osteopenia in patients with rheumatoid arthritis, to study the risk factors leading to it, and to develop preventive measures.

Materials and methods: 60 rheumatoid arthritis patients who were in inpatient treatment for 6 months from September 2018 to February 2020 were examined at the "Rheumatology" department of the Bukhara Regional Multidisciplinary Medical Center. As a control group, 40 ambulatory healthy women and men were selected. During the examination, a questionnaire was conducted to determine risk factors for osteoporosis and osteopenia. They were divided into groups according to disease activity, duration, level of joint function impairment, glucocorticosteroid and cytostatic administration, and the level of osteoporosis and osteopenia was studied. In order to determine the bone mineral density (BMD) in the patients, a densitometry device called SONOST 3000 (ultrasound bone densitometer) and radiography of the damaged joint were performed. The static analysis of test results was performed on an IBMPC/AT personal computer and Microsoft office ESXEL 6.0 software. Measurements are given in M±m. Character correlation was analyzed using Pearson's linear correlation coefficient. Spearman's correlation coefficient was used to evaluate qualitative and quantitative characteristics. $p < 0.05$ was used as the reliability criterion.

Results and their justification

All patients underwent osteodensitometry. According to the results of scientific work, 19 (32%) of 60 patients aged 40-70 (average age 57.2 ± 2.7%) had osteoporosis, 24 (40%) had osteopenia, and 17 (28%) had normal indicators. was noted (r < 0.05). In

order to study the risk factors of osteopenia and osteoporosis in all patients, bone mineral density in menstruating patients and osteoporosis status in menstruating patients were studied. In this case, osteopenia was mainly detected in women whose menstrual cycle was preserved, and it was detected in 25 (42%) patients. In group 2, osteoporosis was detected in 18 (30%) patients with menopause. Thus, in postmenopausal RA patients, an increase in OP status was observed due to an increase in the number of osteopenia and a decrease in bone mineral density.

Bone mineral density was examined in 53 RA women and 20 non-RA control subjects to assess the relationship between body mass index and OP in patients. Compared to the control group, RA patients had lower body weight and TVI (p<0.05).

The relationship between OP activity, duration, patient age, joint dysfunction and GKS (glucocorticosteroid) intake was studied in patients. When the results were analyzed, changes in the skeletal system were more evident in women with RA compared to men. It was noted that osteoporosis was more pronounced than osteopenia in climacteric women over 40 years of age. According to the activity of RA, it was found that the disease activity is directly proportional to the process of osteogenesis in the bones. Osteopenia and osteoporosis signs are higher in RA patients with II and III activity as calculated by DAS 28. When all patients were x-rayed and analyzed the results of the affected joint, Rg II level 17, Rg III level 22, Rg IV level 6 patients were correctly proportional, respectively, 43% of osteopenia and 28% of osteoporosis data were recorded (group 1 r=0.77 in group 2 r=0.69 r <0.001). Therefore, in order to prevent secondary osteoporosis and its complications, pathological fractures and ankylosis of the joint bones in all rheumatoid arthritis patients, taking into account the risk factors that lead to OP, it is advisable to evaluate SMZ through an osteodensitometry device and make additions to the treatment plan. When 60 patients with osteoporosis and osteopenia were given a combination of olendronic acid and calcium preparations belonging to the group of bisphosphonates for 3 months, it was noted that the bone mineral density changed to normal in 18 of the 24 osteopenic patients, i.e. 56%. 10 out of 19 osteoporotic patients, 49% showed a change to osteopenia (r < 0.05).

Conclusion: autoimmune rheumatoid arthritis itself is a risk factor for patients in the development of osteopenia and osteoporosis caused by changes in BMD (bone mineral density). This is consistent with the data of many studies.

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