Methods: The prospective study included 109 women aged 38-75 y.o., of I-III Kellgren J. - Lawrence J. stage of knee OA (ACR), who signed an informed consent. The average age was 59.3 ± 8.7 y.o. (from 38 to 74), the average duration of the OA was 7 (4-12) years. The average values of the body mass index (BMI) corresponded to obesity (30.9 ± 5.4 kg / m²), waist circumference (WC) – 94.4 ± 11.7 cm. An individual card was filled in for each patient, including anthropometric parameters, anamnesis and clinical examination data, assessment of knee joint pain according to VAS, WOMAC, KOOS and DN4 indices, and concomitant diseases. All patients underwent standard X-ray of the knee joints, laboratory examination.

Results: AH was diagnosed in 69.7 % patients with OA. Patients were divided into 2 groups, according to the presence or absence of AH (Table 1). Patients with AH were older, had a higher BMI, WC, a longer duration of menopause and significantly earlier its onset ($p < 0.05$). Patients with OA and AH had a more severe course of OA: higher values of pain in VAS, total WOMAC and all its components, DN4, worse indicators of total KOOS ($p < 0.05$). X-ray examination showed a tendency to a more significant narrowing of the medial space of the knee joints ($p = 0.07$). Laboratory examination showed higher values of CRP, ESR, IL-6, and leptin ($p < 0.05$).

Table 1. Comparative characteristics of OA patients with and without AH

Parameters	Patients with AH (n=76)	Patients without AH (n=33)	p
Age, y.o.	61 (57-68)	55.5 (49-58)	<0.01
WC, cm	92 (90-105)	86.5 (84-90)	<0.01
Age of menopause, y.o.	50 (47-52)	55.5 (49-58)	0.02
Duration of menopause, years	14 (7.5-19)	7 (4-8)	<0.01
Duration of OA, years	10 (5-15)	4 (1-6)	0.001
VAS pain score, mm	49 (40-57)	42 (24-50)	0.02
WOMAC pain, mm	189.5 (140-250)	140 (108-162)	0.001
WOMAC stiffness, mm	77.5 (42-100)	56 (33.5-71.5)	0.01
WOMAC functional impairment (FI), mm	651 (547-902)	546.5 (320-663.5)	0.002
Total WOMAC, mm	899 (728-1280)	734 (526.5-882)	0.001
KOOS, points	0.47 (0.36-0.57)	0.6 (0.53-0.75)	<0.01
DN4, points	2 (1-3)	1 (0-2)	0.01
Overall health status, mm	45 (35-55)	36.5 (28.5-48.5)	0.02
The size of the medial space of joint according to X-ray, mm	2.45 (1.35-4.35)	3.6 (2.8-4.3)	0.07
CRP, mg/l	2.38 (1.47-4.85)	1.21 (0.69-2.53)	<0.01
Leptin, ng/ml	37.4 (26.5-53.3)	23.6 (15.1-40.2)	0.01
IL-6, pg/ml	0.7 (0.4-1.2)	0.45 (0.3-0.7)	0.03
ESR, mm/h	14 (7-18)	7 (6-12)	0.02

We founded positive ($p < 0.05$) associations between AH and a more severe, prolonged course of OA ($r = -0.39$, $p < 0.01$) in the the Spearman rank-order correlation coefficient analysis. Thus, patients with AH had higher values of VAS pain ($r = 0.31$, $p < 0.01$), total WOMAC ($r = 0.31$, $p < 0.01$) and all its components (pain ($r = 0.33$, $p < 0.01$), FI ($r = 0.3$, $p < 0.01$) and stiffness ($r = 0.24$, $p < 0.01$), DN4 ($r = 0.24$, $p = 0.01$), worse indicators of total KOOS ($r = -0.42$, $p < 0.01$) and overall health status ($r = 0.23$, $p = 0.02$), more often detected more advanced stage of OA ($r = 0.24$, $p = 0.03$) and synovitis ($r = 0.23$, $p = 0.01$). In addition, positive relationships were found with CRP ($r = 0.31$, $p < 0.01$), IL - 6 ($r = 0.3$, $p = 0.03$), ESR ($r = 0.3$, $p = 0.02$). Positive relationships were confirmed between AH and age ($r = 0.39$, $p < 0.01$), menopause duration ($r = 0.39$, $p < 0.01$), WC ($r = 0.37$, $p < 0.01$), leptin ($r = 0.35$, $p = 0.01$), the presence of hypertriglyceridemia ($r = 0.35$, $p = 0.01$) and cardiovascular risks according to SCORE ($r = 0.26$, $p = 0.02$), considering traditional risk factors for cardiovascular diseases (CVD).

Conclusion: Thus, we found that AH in patients with knee OA is affected by a variety of variables, both related to traditional CVD factors and to OA itself, and the correlations found are approximately equal in strength. The results obtained require further study, and it is possible that preventive measures aimed at reducing the traditional risk factors of diseases of the circulatory system, or correcting existing CVD, will contribute to a more favorable course of OA.

Disclosure of Interests: None declared

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POS0131 10-YEAR PROBABILITY OF A MAJOR OSTEOPOROTIC FRACTURES IN WOMEN WITH OSTEOARTHRITIS OF THE KNEE JOINT

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Background: The relationship between osteoporosis and osteoarthritis (OA) is complex and contradictory. Some studies suggest a protective effect of OA

in osteoporosis [1-2]. However, other studies show that increased bone mineral density (BMD) in OA not only does not reduce the risk of fractures, but can also increase it [3-4].

Objectives: To assess the 10-year probability of osteoporotic fractures using the FRAX calculator in women with OA of the knee joint.

Methods: The study included 22 women (average age 63.7 ± 1.01 years) diagnosed with ACP of the knee joint according to the ACR criteria (1991). The Control Group included 24 conditionally healthy women without OA knee joint, with an average age of 63.6 ± 1.37 years.

The BMD (g/cm²) and the T-criterion (standard deviation, SD) of the neck of the femur and lumbar spine (L1-LIV) were evaluated by the method of two-power X-ray absorption (DXA) (apparatus «Lunar Prodigy Primo», USA). 10-year probability of major osteoporotic fractures (clinically significant fracture of the spine, distal fracture of the forearm, fracture of the proximal femur, or fracture of the shoulder) and fracture of the proximal thigh with the FRAX calculator (version 3.5 for Russian population).

Results: An osteopenic syndrome in the cohort under investigation was found in 42 (91.3%) patients, of whom osteopenia in 24 (52.2%) women and osteoporosis in 18 (39.1%). A normal BMD is registered in 4 (8.7%) patients.

In the group of patients with knee joint OA, only 2 (9.1%) of women had a normal BMD, 11 (50.0%) of osteoporosis, and 9 (40.9%). Osteopenic syndrome is generally found in 20 (90.9%) patients.

In the control group, osteopenic syndrome has been diagnosed in 22 (91.7%) of whom: osteopenia in 13 (54.2%), osteoporosis in 9 (37.5%) patients. Two (8.3%) women had a normal BMD. There were no statistically significant differences in the structure of the osteopenic syndrome among the studied groups ($p = 0.961$).

An analysis of the 10-year probability of major osteoporotic fractures found that women with OA knee joint had the above probability of 12.3 ± 0.91 , and in the control group 14.2 ± 1.06 ($p = 0.085$).

The 10-year probability of fracture of the proximal femur in women with OA was statistically less significant than in the control group: 1.55 ($0.70; 1.98$) and 2.10 ($1.20; 2.95$), ($p = 0.031$), respectively.

Conclusion: The total incidence of the osteopenic syndrome in the cohort under investigation was 91.3% (90.9% in women with OA, 91.7% in the control group). The frequency of registration of osteopenia and osteoporosis in women with OA did not differ statistically significantly from the control group. The probability of major osteoporotic fractures within 10 years was comparable in these groups. The probability of a proximal femur fracture in women with OA was statistically significant, but not clinically significant, compared to the control group.

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Crystal arthritis

POS0132 IS THE INTERCRITICAL GOUT REALLY ASYMPTOMATIC? THE INFLAMMATORY ROLE OF THE SILENT URATE CRYSTAL DEPOSITION

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Background: Gout is the most prevalent inflammatory arthritis. Gout is chronic inflammatory deposition disease related to an increase of cardiovascular (CV) events and mortality. Subclinical chronic inflammation has been demonstrated in this patients but not its relation with the monosodium urate (MSU) crystal deposit size and the number of CV risk factors.