Background: The impact of knee osteoarthritis on the risk of low-energy fractures remains an open question in recent times. Some cohort studies show that OA of the knee joint is associated with increased risk of fractures [1-3]. Other studies do not support this link [4-5].
Objectives: to compare the incidence of osteopenic syndrome and low-energy fractures in postmenopausal women with osteoarthritis (OA) of the knee joint.
Methods: The study includes 98 women, of whom: 51 (median age 63.0 [59.3;69.8] years) are diagnosed with OA of the knee joint according to the ACR criteria (1991) and 47 without OA of the knee joint (median age 65.0[61.8;71.0] years). The bone mineral density (BMD) (g/cm2) and the T-criterion (standard deviation, CO) of the femur neck and lumbar spine (LI-LIV) were evaluated by the two-energy X-ray absorption (DXA) method (Lunar Prodigy Primo, USA). The DXA data of the femoral neck and the lumbar spine were interpreted using the following reference intervals: normal BMD - T-criterion -1 CO, osteopenia - T-criterion from -1 or less CO. Low-energy fractures were considered to have occurred with minimal trauma (falling from a height of own height to the same surface or an even smaller injury) and were found in the anamnesis.
Results: In the group of patients with OA of the knee joint, normal BMD was found to be statistically significantly more frequent than the control group (15.7% vs. 4.3%) p=0.033. It is shown that in women with OA of the knee joint, low-energy fractures were statistically less recorded than in the control group: in 29.4% and 51.0% of women respectively (p=0.002). The chances of having low-energy fractures in the group of patients with OA of the knee joint were statistically lower by a factor of 2.64 compared to the control group (OR = 0.378; 95%CI: 0.203 - 0.703).
Conclusion: The low frequency of low-energy fractures and the lower the chances of them in women with OA of the knee joint compared to the control group are probably associated with lower prevalence of the osteopenic syndrome among these patients.
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AB0989 PLANTAR FASCIITIS IN PATIENTS WITH KNEE OSTEOARTHRITIS

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Background: Knee osteoarthritis (OA) is a highly prevalent disease, it shares with plantar fasciitis similar risk factors including aging, occupation, obesity, and inappropriate shoe wear. The association between knee OA and heel pain caused by plantar fasciitis has received limited attention to date.
Objectives: The aim of our study was to detect plantar fasciitis using ultrasound in patients with confirmed knee OA.
Methods: We conducted a cross-sectional study including 30 patients with symptomatic knee OA. Health status was evaluated using the Western Ontario and McMaster Universities Osteoarthritis (WOMAC) index. The functional impairment of knee OA was determined by the Lequesne index. Ultrasound evaluation of heels was performed in all patients searching signs of plantar fasciitis (measure thickness, echogenicity, enthesopathy, calcification, erosion, doppler).
Results: The study included 30 patients. Mean age was 62.09 +/- 6.7 years. Patients reported lower back pain and heel pain in 67% (n=20) and 47% (n=14) respectively. Knee symptoms were evaluated by the WOMAC index: mean score for pain, stiffness, and physical function was 9.68 +/- 4.25, 4,18 +/- 7.55 and 27.27 +/- 16.39, respectively. Mean Lequesne index for the knee OA was 11,4 +/- 4,57. Physical examination revealed limited range of motion in knees in 33 % (n=10) with a genu flexum in two patients. Patella tap was positive in 20 % (n=6). Heel ultrasound revealed thickening of the plantar fascia in 50% (n=15). Other sonographic abnormalities found were loss of fibrillar structure in 26.7% (n=8), perifascial collections in 13.3% (n=4), calcifications in 16.7 % (n=5) and erosions in 33.3% (n=10). No correlation was found between health status attested by WOMAC index and the presence of plantar fasciitis.
Conclusion: Our study showed that half of our knee OA patients have plantar fasciitis confirmed with ultrasound. More studies with larger cohorts are needed to explain the correlation between the two lesions.
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AB0990 CORRELATION OF CLINICAL PARAMETERS WITH URINARY COLLAGEN TYPE II C-TELOPEPTIDE AND KNEE CARTILAGE THICKNESS MEASURED WITH ULTRASOUND IN PATIENTS WITH KNEE OSTEOARTHRITIS

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Background: Although knee osteoarthritis (KOA) incidence is one of the highest among chronic diseases, no effective biomarkers are known for its management [1].
Objectives: To estimate the relationship between the sensitive marker of matrix metalloproteinase-dependent cartilage degradation - urinary collagen type II C-telopeptide (uCTX-II) levels, patient-reported outcomes (PRO), and knee cartilage thickness measured with ultrasound (US) in patients (pts) with KOA.
Methods: WOMAC questionnaire and Leken`s functional index, VAS pain by pts, knee joints US, uCTX-II levels (ng/ml; ELISA) were evaluated in 46 pts (71.7% female) with KOA, who haven`t received any medical treatment except paracetamol or NSAIDs the last 12 weeks. The mean age was 62.6±6.2, mean disease duration – 10.2±6.3 years; 63% and 27% of pts had Kellgren-Lawrence grade II and III, respectively. The knee cartilage thickness (mm) in three compartments (medial, middle, lateral) of the patellofemoral region was evaluated using a linear L50 sensor in standard sensor positions, frequency 5–12 MHz. Calculation of average thickness for each knee joint and both joints was performed. The Spearman correlation coefficient was utilized to detect the association of uCTX-II, PROs and knee cartilage thickness.
Results: The mean values (M±σ) of WOMAC and Leken`s indices were 39±13,65 and 12±4,18, respectively. The mean value of VAS pain by pts was 57.7±16.5. The mean concentration of uCTX-II was 0.18±0.12. The means of cartilage thickness were: 1.7±0.33 for the right, 1.7±0.36 for the left, and 1.7±0.31 for both knee joints. The mean value of both knee joints cartilage thickness had significant negative moderate correlation with Leken`s index ($r=-0.354$, $p<0.01$). Leken`s and WOMAC indices significantly correlated with each other ($r=0.354$, $p<0.01$). According to VAS following tertile groups were detected: 1 group: means interval less than 50 mm; 2 group: means interval 50-64 mm; 3 group: more than 64 mm. There were negative moderate correlations between cartilage thickness of the left knee joint and Leken`s index ($r=-0.513$, $p=0.03$) and WOMAC ($r=-0.535$, $p=0.024$) only in group 1. Also, pts were divided into three groups according to disease duration: 1 group: means interval less than 7 years; 2 group: means interval 7-10 years; 3 group: more than 10 years. There were negative correlations between uCTX-II and medial, middle compartments of left knee cartilage thickness ($r=-0.474$, $p=0.03$; $r=-0.592$, $p<0.01$, respectively). WOMAC negatively correlated with cartilage thickness of the left ($r=-0.517$, $p=0.02$) and right ($r=-0.435$, $p=0.046$) knee joints. Leken`s index negatively correlated with cartilage thickness of the left knee joint ($r=-0.590$, $p<0.01$). All correlations were moderate and found in group 2. There were negative moderate correlation between uCTX-II and the mean value of middle compartments of both knee joints cartilage thickness ($r=-0.538$, $p=0.04$) and positive moderate correlation between uCTX-II and Leken`s index ($r=0.561$, $p=0.036$) in men. There were no correlations between uCTX-II and cartilage thickness of each knee joint and both joints in all pts.
Conclusion: Cartilage thickness measured with US associated with PROs in KOA pts. At the same time, the association between uCTX-II and cartilage thickness was less pronounced, only in men and in pts with disease duration 7-10 years. In pts with VAS pain less than 50 mm and in the group of pts with 7-10 years disease duration - WOMAC and Leken`s indices negatively correlated with the thickness of the cartilage of the knee joints. In other cases, correlations didn`t represent the expected relationship between uCTX-II level and clinical, instrumental characteristics of KOA. This may be because the current level of uCTX-II characterizes only the state of cartilage metabolism at the time of examination of the patient and doesn`t show the cumulative results of previous anabolic/catabolic changes in articular cartilage.
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