15 mg 1 per day. For 6 months 3rd group (n=54) received diacerein 50 mg twice a day and the 4th group (n=32) - chondroitine sulfate (CS) 500 mg twice daily. 5th group (n=30) received glucosamine sulfate (GS) 400 mg 3 times per week for 1.5 months. It was estimated dynamics of VAS, WOMAC, Lequesne, uric acid (UA), CRP, IL-1 β , IGF-1, NO, ESR, biochemical indicators. Statistical analysis - SPSS Statistics.

Results: Nimesulide compared to meloxicam found more effective for WOMAC index, the reduction of pain, stiffness and functional failure 53.93% vs 37.3%, 29.7% vs 13.5%, 41.6% vs 26.6% respectively. Only nimesulide decreased NO by 40.2%, and showed a decrease trend of UA from 375,33 $\pm$ 24,6 to 321,57 $\pm$ 19,6 mkmol/l while meloxicam had no effect on their levels. In 60% of patients with OA was found hyperuricemia with nephrolithiasis. Was showed the relation between the severity of OA and the presence of hyperuricemia by VAS, Lequesne, WOMAC, lesions more number joints, higher stage of X-ray progress. Diacerein, CS and GS showed clinical effect on pain reduction by VAS, Lequesne, WOMAC ($p < 0.05$), respectively. Was showed lower levels of CRP, IL-1, NO during treatment by diacerein (CRP from 5,6 (IQR: 3,6–8,0) to 3,0 (IQR: 1,95–4,3) mg/l, IL-1 from 19,47 (IQR: 15,22–23,81) to 12,0 (IQR: 9,0–16,2) pg/ml, NO of 4,09 (IQR: 3,0–4,19) to 2,2 (IQR: 1,0–3,44) mmol/l), CS (CRP from 6,0 (IQR: 3,25–9,0) to 3,10 (IQR: 1,81–6,0) mg/l, IL-1 20,0 (IQR: 11,5–26,52) pg/ml to 16,7 (IQR: 9,80–18,62) pg/ml, NO of 3,0 (IQR: 2,05–4,00) to 2,0 (IQR: 2,0–3,0) mmol/l) and GS (CRP from 6,0 (IQR: 4,0–8,45) to 4,0 (IQR: 4,0–6,0) mg/l, IL-1 from 4,69 (IQR: 2,5–7,59) to 2,52 (IQR: 1,75–3,94) pg/ml, NO 3,28 (IQR: 2,02–4,79) to 2,37 (IQR: 1,59–3,03) mmol/l) ($p < 0.05$). Diacerein reduced UA from 415,5 (IQR: 347,0–452,5) to 374,0 (IQR: 318,75–423,5) mkmol/l ($p = 0.001$) and glucose from 5,1 (IQR: 4,8–5,8) mmol/l to 4,88 (IQR: 4,00–5,40) mmol/l ($p = 0.0001$). CS in patients with hyperuricemia ($p = 0.001$) increased the level of UA, which reduced the efficacy of CS, but without hyperuricemia didn't influence the level of UA and efficacy of CS.

Conclusions: Was showed that nimesulide is more effective than meloxicam during first 14 days, and reduces NO, an important proinflammatory factor. The presence of hyperuricemia in 60% patients with OA, resulted in a more severe OA. Diacerein decreases UA and glucose, given an advantage in treatment these patients, which isn't presented with CS (which increased UA).

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AB0813 PROPOSAL FOR THE CONSTITUTION IMPLEMENTATION AND DEVELOPMENT OF THE PROGRAM OF CENTERS OF EXCELLENCE IN OSTEOARTHRITIS IN LATIN AMERICA

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Background: Osteoarthritis (OA) is the most prevalent disease in the Americas, with an estimated prevalence of 5–10% of the population. These patients have difficulties accessing the clinic, as well as poorly successful therapeutic programs. We plan to develop a program of Centers of Excellence (CoE) in OA, to meet and respond to these needs, generate data and local research applicable to our health systems.

Objectives: In a first phase: To create OA pilot centers in Venezuela and Colombia under the CoE scheme, defined in REAL-PANLAR project (Panamerican league of associations for rheumatology project for implementation of CoE in Rheumatoid Arthritis). In a second phase under the auspices of PANLAR to create the Pan American Network of Centers of Excellence in OA (CEOA).

Methods: A systematic review of the literature in global and regional databases (Pubmed, Medline, Scopus, Lilacs) was conducted and through a Delphi-modified methodology and a consensus of experts, naming a coordinator by subject, we established the conceptual bases and defined OA Center of Excellence.

Results: The group proposes: 1. Clinical detection and early diagnosis of OA, discarding false positives and diagnosing early OA; 2. Model of patient-centered and multidisciplinary care: frequency of care are to be established according to the conditions of the patient and the multidisciplinary team. 3. Implementation of a specific clinical register of OA with indexes such as WOMAC, Lequesne and also EuroQol and definition of socioeconomic characteristics. 4. Paraclinics and Imaging: Each patient will be given a general laboratory study at admission and then every two years including a metabolic profile. Conventional Rx of hands, hips, knees or lumbosacral column depending on the location and then annual or depending on the evolution. Ultrasound, upon admission to the program, six month later, if synovitis was detected, for redefining the treatment and then annually for evaluation of the articular damage; CT and MRI when deemed necessary (OMERACT) 5. Definition of the disease management program in axes: treatment protocol of pain with sequential treatment lines, DMOADs, viscosupplementation, Glucosamine + Chondroitin, Strontium Ranelate, Piascledin; Alternative Medicine

and Surgical Treatment 6. Establishment of a management program that includes Structure, Process and Outcome Indicators to define the CEOA as Standard, Optimal and Model. 7. Education modules for patients and families; Continuing Medical Education for all members of the multidisciplinary team; Generation of research in the areas above mentioned.

Conclusions: The unmet needs in OA determine the implementation of units of CEOAs, to promote management knowledge, and define T2T strategies, in order to improve clinical outcomes, reducing disability and consequently economic and social costs.

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AB0814 MEDIAL SHIFT OF THE TIBIAL ARTICULAR SURFACE SHOULD BE TAKEN INTO ACCOUNT FOR ONE FACTOR OF MEDIAL OSTEOARTHRITIS OF THE KNEE

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Background: Varus knee is one factor of medial osteoarthritis of the knee. According to the concept of the constitutional varus¹⁾, the bone growth disturbance at the growth plate in the medial proximal metaphysis of the tibia results in proximal tibia vara. In this situation, the tibia is bent at the proximal metaphysis and the tibial articular surface (TAS) may be shift medially. The medial shift of the TAS will increase the mechanical loading in the medial side of the knee. The medial shift of TAS will also influence the value of the Hip-knee-ankle (HKA) angle because the tibial plafond that is the end point of the mechanical axis (MA) of the tibia will shift laterally.

Objectives: The purpose of this study was to assess the extent of the medial shift of TAS in knees with medial osteoarthritis, and to assess the effect of this medial shift of TAS on the value of HKA angle.

Methods: This study consists of 116 knees with medial osteoarthritis. The mean age was 75.3 years old. The mean standing femorotibial angle (FTA: lateral angle between femoral and tibial anatomical axes) was 183.6°. The anatomical axis (AA) was the central line of the femoral and the tibial shaft. On the anteroposterior view radiograph of the tibia, AA, MA and tibial plateau tangent were drawn. MA is the line between the center of the tibial spines notch and the center of the tibial plafond. Two angle parameters and two distance parameters were measured. Those are angle between AA and MA (Angle AA-MA) (the value was positive when MA located medial to AA), angle between the tibial plateau tangent and the line perpendicular to AA (Angle plateau), distance from AA to the center of the tibial spines notch on the tibial plateau (Distance AA-MA) (the value was positive when Point M located medial to AA), and the length of MA.

Results: The mean ($\pm$ SD) Angle AA-MA and Angle plateau was 1.0° $\pm$ 0.6° and 8.2° $\pm$ 2.9°, respectively. The mean Distance AA-MA and length of MA was 5.6 $\pm$ 3.4mm and 347.3 $\pm$ 3.4mm, respectively. Figure 1 shows the relationship between Angle Plateau and Distance AA-MA. The correlation coefficient between two parameters was 0.62. The more proximal tibia had varus deformity, the more the tibial articular surface shifted medially. The maximum Distance AA-MA was 16.1mm. In this case, HKA angle underestimated varus deformity up to 3°.

Conclusions: The knees with proximal tibia vara have medial shift of the tibial articular surface. There are three factors to influence the evaluations of the medial osteoarthritis of the knees. Firstly, varus knees have higher loading condition in medial compartment because of proximal tibia vara and medial shift of the tibial articular surface. Secondly, HKA angle under-estimates varus deformity in knees with medial shift of the tibial articular surface. Thirdly, FTA cannot reveal the exact loading condition, either. Even with the same FTA, it is clear that loading in the medial compartment is larger in knees with medial shift of the tibial articular surface compared with knees with simple medial osteoarthritis. The medial shift of the tibial articular surface should be taken into account for one factor of medial osteoarthritis of the knee.

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AB0815 PREVALENCE OF DORSAL AND LUMBAR VERTEBRAL OSTEOARTHRITIS IN WOMEN OVER 50 YEARS OF AGE EVALUATED USING THE LANE RADIOGRAPHIC SCORE IN FIVE LATIN-AMERICAN COUNTRIES

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Background: Osteoarthritis is the most common musculoskeletal disease worldwide. Spinal osteoarthritis (OA) is a frequent cause of back pain and disability in patients over 60. The frequency of radiographically-evident dorsal and lumbar OA in Latin America is unknown

Objectives: To determine the prevalence of dorsal and lumbar vertebral OA in a database-driven random sample of women 50 years of age and older from the Latin-American Vertebral Osteoporosis Study (LAVOS) in 5 LA countries (México, Brazil, Argentina, Colombia and Puerto Rico)

Methods: Lumbar and Dorsal X-rays were performed per a standardized protocol and analyzed independently by two trained radiologists and a general practitioner using the Lane score to establish diagnosis and degree of vertebral OA severity. Inter and intra observer agreement was determined to be $\kappa > 0.6$. Descriptive statistics were used to analyze demographic variables. Prevalence was determined using means and standard deviations for quantitative variables and simple frequencies and percentages for qualitative variables. Bivariate analysis was performed to associate age, BMI and other variables with the presence of OA, using χ^2 and the magnitude of association through OR and 95% CI, carrying out a multivariate analysis to adjust the frequency of OA to other variables

Results: 405 women, mean age 69.4 (58–80), median weight 64 kg (56.9–73.4) mean height 151.8 cm (± 7.6) were analyzed. 5.65% were underweight, 21% had normal weight, 41.6% were overweight and 31.5% were obese. Argentina contributed 19% of the sample, Brazil 14.8%, Colombia 20.1%, México 33.3% and Puerto Rico 12.8%. OA prevalence per age group was 76.3% (95% CI 68.4–84.2) in those 50–59, 83.8% (95% CI 76.6–91.2) in those 60–69, 84.3% (95% CI 76.7–91.7) in those 70–79 and 94.9% (95% CI 90.4–99.3) in those 80 or older ($p=0.003$). Prevalence per country was as follows: Brazil 93%, Colombia 90%, México 85%, Puerto Rico 79% and Argentina 74%. Prevalence per BMI was 80% in normal weight, 82.5% in overweight and 87.5% in obese. 72.6% of sampled women had dorsal OA (Argentina 48.1%, Brazil 65%, Puerto Rico 73.1%, México 79.3%, Colombia 90.1%). Obesity was a risk factor for the development of dorsal OA (OR 2.46) when compared to normal BMI ($p=0.01$). Lumbar OA was found in 44.9% of the sampled women (Argentina 68.8%, Brazil 65%, Colombia and Puerto Rico 42.3% each, México 37%). Adjusting for age, BMI, height loss, steroid use and physical activity, the OR for presenting OA is 6.45 ($p<0.001$) in women over 80 compared to those 50–59

Conclusions: Radiographic OA is highly prevalent in Latin American women over 50 and associated with progressing age and BMI. Brazil has the highest prevalence of OA.

Disclosure of Interest: None declared

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AB0816 COMPREHENSIVE ANALYSIS OF A NEW CHEMICAL COMPOUND FOR THE TREATMENT OF OSTEOARTHRITIS BY A PROTEOMIC APPROACH IN HUMAN CHONDROCYTES

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Background: Selective cyclooxygenase (COX)-2 inhibitors were developed to prevent NSAIDs gastro-intestinal adverse effects. VA692, a new hydroxyethyl selective COX-2 inhibitor, showed anti-inflammatory, anti-nociceptive and chondroprotective properties. Proteomics is being applied for the study of drug mode of action, toxicity and to identify new drugs targets.

Objectives: The aim of this study was to analyze the anti-inflammatory effect of

VA692, in comparison with celecoxib. By iTRAQ methodology, we quantitatively analyzed the different expressed profiles in T/C-28a2 cell line treated with the studied drugs in presence of IL-1 β .

Methods: Human T/C-28a2 chondrocytes cell line were generated by Goldring group. Human articular cartilage was obtained from femoral heads of five OA patients. Cells were incubated with VA692 and celecoxib (1, 0.5 and 0.2 μ M) in presence of Interleukin (IL)-1 β (5ng/ml) for 48h. The expression of inflammatory cytokines and anti-oxidant enzymes was evaluated by quantitative qRT-PCR, PGE₂ release by ELISA, and apoptosis and ROS production by flow cytometry. T/C-28a2 cell line was also processed to carry out western blot tests and finally employed for the iTRAQ analysis. Statistical analysis was performed by ANOVA and Bonferroni multiple comparison tests.

Results: IL-1 β -stimulated chondrocytes showed a significant increase ($p<0.001$) of COX-2, IL-1 β , IL-6, IL-8, superoxide dismutase (SOD)-2 and catalase (CAT) gene expression, as well as of PGE₂ levels. The tested drugs significantly counteracted the effect of IL-1 β , with a better modulation by VA692 1 μ M in T/C-28a2 cell line ($p<0.01$ for COX-2, IL-1 β , IL-8, CAT; $p<0.001$ for IL-6, SOD-2). Regarding apoptosis and ROS production, the new drug was able to significantly reduce ($p<0.05$) their increase induced by IL-1 β ($p<0.05$). Proteomic analysis led to identification of 797 proteins in T/C28a2 cell line, 123 of which were significantly modulated by VA692 in presence of IL-1 β ($p<0.001$), and 34 by IL-1 β alone ($p<0.05$). 22 proteins were commonly modulated in both groups, thus indicating that 101 proteins were regulated by VA692 in a specific manner. Among the proteins down-regulated by VA692, some with structural function were detected, responsible for cytoskeleton reorganization, as well as chaperones (heat shock proteins) and glycolytic enzymes. Proteins involved in calcium metabolism and in ribosome biogenesis resulted up-regulated instead, as well as SOD-2 as confirmed by western blot analysis.

Conclusions: Our data demonstrated the anti-inflammatory effect of VA692, suggesting also its anti-apoptotic and anti-oxidant role. The proteomic profile showed that VA692 induced not only an anti-inflammatory effect in chondrocytes but, interestingly, this compound also seemed to regulate their anabolic response.

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AB0817 IMPROVING CARE FOR PATIENTS WITH OSTEOARTHRITIS IN FIVE EUROPEAN COUNTRIES: THE JIGSAW-E PATIENT PANEL

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Background: EULAR guidelines for osteoarthritis (OA) endorse high quality care and support to self-manage with core recommended treatments such as exercise, weight loss and the provision of written information and education. An EU-funded project, Joint Implementation of Guidelines for oSteoArthritis in Western Europe (JIGSAW-E)¹, aims to improve the management of OA across five European countries (UK, Netherlands, Norway, Denmark, Portugal) by implementing an intervention to enhance the OA consultation.

Coordinated, cross-border Patient and Public Involvement and Engagement (PPIE), working in active partnership with the project team, is an essential component of JIGSAW-E.

Objectives: To describe the PPIE in the JIGSAW-E project.

Methods: A two-day international workshop established the JIGSAW-E Patient Panel to act as the voice of patients and the public in the project and to co-develop clear information and resources for patients. Panel members meet regularly with the project teams in each country. The Patient Panel is coordinated and supported by dedicated PPIE teams in the UK and Netherlands.

Results: The JIGSAW-E Patient Panel consists of Patient Champions and patient representatives from newly established or existing patient groups in each of the five countries. The Patient Champions form a core group of seven patient representatives who work closely with the Patient Panel and the JIGSAW-E team. PPIE activities have included:

- One Patient Champion sits on the JIGSAW-E project steering committee.
- In the Netherlands, Patient Panel members substantially contributed to the translation and cultural adaptation of a guidebook for patients with OA. This process will continue as JIGSAW-E is rolled out in each of the five countries.
- Patient Panel members in the UK have helped refine an OA Quality Indicator questionnaire² for use in JIGSAW-E.

A glossary of terms has been developed to support the involvement of Patient Panel members throughout the project.

Conclusions: Effective and meaningful PPIE is a central component to delivery and success of raising awareness and implementing the OA management