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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 $k>0.6$. 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 c^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% CI76.6–91.2) 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 cyclooxigenase (COX)-2 inhibitors were developed to prevent NSAIDs gastro-intestinal adverse effects. VA692, a new hydroxyetyl 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-1β.
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 0.2μM) in presence of Interleukin (IL)-1β (5ng/ml) for 48h. The expression of inflammatory cytokines and anti-oxidant enzymes was evaluated by quantitative qRT-PCR, PGE_2 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-1β-stimulated chondrocytes showed a significant increase ($p<0.001$) of COX-2, IL-1β, 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-1β, with a better modulation by VA692 1μM in T/C-28a2 cell line ($p<0.01$ for COX-2, IL-1β, 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-1β ($p<0.05$). 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-1β ($p<0.001$), and 34 by IL-1β 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 riorganization, as well as chaperones (heat shock proteins) and glycolitic 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 questionnaire[2] 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