similar to those occurring in spondyloarthritis (SpA). Patients with hypermobility and suspected SpA pose a unique challenge owing to the high prevalence of back pain in the hypermobility cohort and the absence of spinal restriction on clinical examination.

Objectives: In this study, we aim to investigate the incidence of MRI SIJ lesions in patients with hypermobility.

Methods: We performed a retrospective study of all patients with a confirmed diagnosis of hypermobility related disorders (including hypermobility syndrome, hypermobility spectrum disorders and Ehlers-Danlos Syndromes) referred for an MRI lumbar spine and SIJ between 2011 and 2019 to investigate long-standing back pain. MRIs were examined by a musculoskeletal (MSK) radiologist with more than 25 years of experience, who was blinded to the clinical outcome of the patients. MRI SIJs were assessed for the presence of bone marrow oedema, subchondral sclerosis, erosion, fatty change, enthesitis, ankylosis, joint fluid and capsulitis.

Results: 51 patients with confirmed hypermobility related disorders were referred for MRI SIJ and lumbar spine between 2011 and 2019. 3 patients demonstrated clinical features in keeping with a diagnosis of SpA and were excluded from the study. 15/48 (31.3%) of patients with hypermobility and back pain (but no clinical picture of SpA) were found to have inflammatory and/or structural lesions on MRI SIJ. The most frequent lesions were small foci of bone marrow oedema (16.6%) followed by subchondral sclerosis (12.5%) and fatty change (10.4%). The incidence of erosions was 4.2%.

Conclusion: There is a relatively high incidence of inflammatory and structural lesions on MRI SIJ of patients with hypermobility. The presence of hypermobility should be taken into consideration when interpreting MRI changes in patients with suspected SpA. Further research into long-term outcomes of MRI SIJs in patients with hypermobility and back pain is required to establish the clinical significance of these findings.

Disclosure of Interests: : Alexis Jones: None declared, Coziana Ciurtin Grant/research support from: Pfizer, Consultant of: Roche, Modern Biosciences, Hanadi Kazkaz: None declared, Margaret Hall-Craggs: None declared

DOI: 10.1136/annrheumdis-2020-eular.5686

THU0493 IMPACT OF AGE, GENDER AND EDUCATION LEVEL ON THE CHOICE OF TREATMENT METHOD FOR BACK PAIN AMONG PEOPLE OVER 50 YEARS OF AGE

M. Neiman¹, M. Hiller¹, J. Napora¹, A. Wojteczek², M. Ziętkiewicz², Z. Zdrojewski². ¹Students Scientific Circle of Clinical Rheumatology, Department of Internal Medicine, Connective Tissue Diseases and Geriatrics, Medical University of Gdansk, Gdansk, Poland; ²Department of Internal Medicine, Connective Tissue Diseases and Geriatrics, Medical University of Gdansk, Poland, Gdansk, Poland

Background: According to data collected by the Statistics Poland in 2014, lower back pain is the second most common complaint reported by people over the age of 60 and occurs in about 40% of them. Another 29% of respondents suffer from pain in other spine sections. Treatment of such a common condition can be a challenge due to the multitude of causes of pain, accompanying diseases and the patient's approach to his own health.

Objectives: The aim of the study was to investigate whether factors such as gender, age, level of education and pain severity affect self-chosen methods of treating back pain.

Methods: A survey was conducted on students of Pomeranian Universities Of The Third Age. There were collected socio-demographic characteristics of the participants, features of back pain and detailed information on analgesic methods, including drugs, ointments, exercises and physiotherapy treatments (laser, cryotherapy, hydromassage, ultrasound, heat treatments and other). The responses of participants over the age of 50 were included in the analysis. The answers were divided into groups by age (younger - 50–69 years and older - over 70 years), sex, level of education (lower, medium and higher) and intensity of pain assessed on the VAS scale (<6 and ≥6). The collected data were compared in these groups.

Results: 546 answers were received. 291 respondents were 50–69 years old, 255 aged 70–90 and more, 86% (471) of participants were women. 43% of respondents had secondary education and the same number had higher education. Over 90% (494) declared that they have suffered from back pain. Most of them described pain as chronic (56%), the median pain intensity assessed on the VAS scale was 6 [1–10], and the mean pain intensity was 5.89 ± 1.79. 82.6% of respondents declared doing physical exercises to relieve back pain, 75.9% were using physiotherapy, 60.7% were taking analgesic drugs and 54.3% were using ointments, gels, patches and other local analgesic methods. The higher pain severity was observed in group of females (5.74 vs. 5.61, p=0.002) and people with lower education level (6.52) than in other groups (5.89 and 5.68, p=0.005). Analgesic drugs were taken more often by younger people (66.9% vs. 53.7%, p=0.003), women (62.5% vs. 49.2%, p=0.042), people of lower education level group (80.6% vs. 62.2% secondary education group vs. 52.5% higher education group, p<0.001) and by people with pain severity ≥6 (81.5% vs. 68.9%, p<0.001). Analgesic gels, ointments, patches and other pharmaceuticals were

used more often only in group with higher pain severity (62.9% vs. 43.4%, p<0.001). Performing exercises to relieve pain was more often declared by women (84.4% vs. 70.8%, p=0.003) and people with higher education (85.1% vs. 81.3% secondary education group vs. 79.1% lower education group, p<0.001). The study showed that only in groups with varying intensity of pain there was a significant difference in the frequency of using physiotherapy treatments - 68.9% in group with pain severity <6 vs. 81.5% with pain severity ≥6 (p<0.001).

Conclusion: 1. The severity of pain has the greatest impact on the choice of back pain relief method, but this is not the only important factor.

2. People with lower levels of education and men less often perform physical exercises for treatment regardless of the severity of back pain.

3. In the treatment of back pain, attention should be given to recommending the patient an appropriate analgesic method, which will be easily used and more effective.

References:

Population aged 60+. Demographic structure and health. 2016. Statistics Poland.

Disclosure of Interests: : None declared

DOI: 10.1136/annrheumdis-2020-eular.2883

THU0494 BACK PAIN, SPINE OSTEOARTHRITIS AND 'CANDIDATE GENES' POLYMORPHISM

N. Pravdyuk¹, N. Shvyreva¹, N. Shostak¹, A. Novikova¹, E. Zakharova².

¹Russian National Medical Research University named after N.I. Pirogov, Moscow, Russian Federation; ²Medical Genetic Research Center of the Russian Academy of Medical Sciences, Laboratory of Hereditary Metabolic Diseases, Moscow, Russian Federation

Background: Low back pain (LBP) and spine osteoarthritis are among the leading health-related causes of disability and reduction in patient quality of life. More recent work suggested that the factors that lead to disc degeneration may have important genetic components. Genetic predisposition has been confirmed by recent findings of associations between degeneration and gene polymorphisms of matrix macromolecules.

Objectives: Evaluation of genetic polymorphisms of genes collagen 1A1 (COL1A1), interleukin 1β (IL-1β), interleukin 6 (IL-6), vitamin D receptor (VDR) in patients with LBP, associated with spine osteoarthritis.

Methods: We examined 33 patients (men-17, women-16, middle age 28, 7±3.77) with LBP end onset, verified by magnetic resonance imaging (MRI) and 15 controls was carried out. Assessed the intensity of pain syndrome on visual analog scale (VAS, mm) and the nature of its current (IASP, 1994). Polymerase chain reaction and restriction fragments length polymorphism was used to detect the polymorphism of COL1A1 (rs 1800012), IL-1 (rs 1143627), IL-6 (rs 1800795), VDR (rs 1544410).

Results: The severity of the pain (VAS) average was 60 mm, all the patients revealed chronic option currents pain syndrome. In 86 % of patients detected changes disc in the form of protrusions and hernias, 17 % of patients had a characteristic reducing the height of the intervertebral disc of lower height disc and osteophytes, arthritis facet joints identified in 20 % of patients in 34% of patients diagnosed changes type Modic II. In 83% of patients with LBP identified homozygous variant allele (GG) Col1A1 gene. The absence of T-alleles in the gene IL 1β in the group of patients was associated with severity of the disease. Carriage of allele in heterozygous AG found in 54% of patients of the main group and was not observed in the control that requires further accumulation of facts. Identified association GG-genotype of IL-6 clinical and instrumental signs of the syndrome Modic-II.

Conclusion: These findings may be the reason for the patient-specific approach to diagnosing and treatment of back pain. It proves the necessity of research of genetic polymorphisms in patients with spine osteoarthritis.

Disclosure of Interests: : None declared

DOI: 10.1136/annrheumdis-2020-eular.6407

THURSDAY, 04 JUNE 2020

Basic and translational science in paediatric rheumatology

THU0495 NOVEL UNDERSTANDING OF THE PATHOGENESIS OF JUVENILE IDIOPATHIC ARTHRITIS: FOCUS ON MESENCHYMAL STEM CELLS IMPAIRMENT, SENESCENCE AND IMMUNOREGULATORY FUNCTION

L. Zaripova¹, A. Midgley², S. Christmas³, E. Baildam⁴, R. Oldershaw¹.

¹University of Liverpool, Musculoskeletal Biology, Liverpool, United Kingdom;

²University of Liverpool, Women's Health, Liverpool, United Kingdom;

³University of Liverpool, Clinical Infection, Microbiology and Immunology,