Osteoarthritis

AB0958

KNEE PAIN IN OSTEOARTHRITIS: CORRELATION WITH SONOGRAPHIC FINDINGS

A. Radwan, A. Radwan, M. Khalifa, A.M. Elsaman. *Rheumatology and Rehabilitation, Sohag University, Sohag, Egypt*

Background: Osteoarthritis (OA) is a common joint disorder, with the knee being one of the most frequently involved sites. Knee OA causes pain and stiffness and can lead to considerable disability and consequently to a reduced quality of life (Wideman et al. 2014). The level of radiographic knee OA is, at most, moderately associated with the level of pain. Therefore, it is unlikely that pain is predominantly caused by only bone and cartilage pathology. Mechanical, structural, inflammatory, bone-related, neurological and psychological factors play a role in the process that results in painful knee OA (Wenger et al. 2013).

As OA is a disease of the entire joint that is characterised by cartilage breakdown, subchondral bone alterations and formation of osteophytes, as well as soft tissue abnormalities including meniscal degeneration, bursitis, tendonitis, Baker's cyst and synovial inflammation; information about these soft tissue structures might provide more insight into their potential role in the complex process of pain in knee OA (Cook 2016).

Musculoskeletal ultrasonography (US) is a relatively new imaging tool that is non-invasive, safe and relatively inexpensive and is able to create static as well as dynamic images. In addition, it has been shown to be more sensitive than clinical examination in picking up peri- and intra-articular soft tissue lesions (Beyers et al. 2014).

Objectives: To investigate the cause of pain in Knee OA by comparing sonographic and clinical findings in painful and non-painful osteoarthritic knee.

Methods: A cross-sectional case-control study carried out on fifty patients attending to Sohag University Hospitals rheumatology and rehabilitation outpatient clinic with Knee OA fulfilling ACR clinical criteria. They were divided into two groups. Group A (53) patients with knee pain (VAS 33 mm) during physical activity once at least in the previous 3 days prior to inclusion. Another (42) patients without knee pain for at least 1 month prior to inclusion (VAS 0 mm). All of the participants were subjected to the following:

- Full history (demographic data and personal history, detailed history of general health condition and chronic or current diseases).
- Knee clinical examination (including varus deformity angle assessment)
- Sonographic evaluation: of Effusion, Synovial hypertrophy, Baker's cyst, Enthesitis, Power Doppler by SOLAR score, menisci protrusion, bursitis, sonographic signs of Gout or CPPD and scoring of the osteophytes and cartilage

Results: Our study showed that the painful OA group are more obese, more varus deformities, effusion, synovial hypertrophy, cartilage changes, and higher grading of osteophytes than the control group. On the other hand, Baker cyst and meniscal protrusion echogenic foci, double contour, erosions, meniscal and cartilage calcification showed a non-significant difference between the two groups. We included all of the demographic, clinical and sonographic factors in a univariate regression analysis, and this analysis showed that synovial hypertrophy, effusion, the degree of cartilage changes, the degree of osteophytes, bursitis, and weight may be possible risk factors for pain among OA patients.

Abstract AB0958 – Table 1. Multivariate logistic regression analysis of the possible independent risk factors for pain among painful OA group compared to the non painful OA group.

Item	Odd's ratio	CI of Odd's	P value	Rank as a possible risk for pain
Weight	1.078	0.726-1.602	0.710	6
Effusion	4.312	2.172-24.422	0.013	3
Synovial hypertrophy	7.230	0.741-70.526	0.089	4
Degree of cartilage changes	9.523	2.354-38.532	0.002	1
Grade of osteophytes	12.268	2.112-71.283	0.005	2
Bursitis	5.151	0.239-0.296	0.296	5

Abstract AB0958 – Figure 1

Conclusions: Cartilage degeneration, osteophytes, effusion, synovial hypertrophy, bursitis, and overweight respectively, are the leading causes of pain in knee OA.

Disclosure of Interest: None declared

DOI: 10.1136/annrheumdis-2018-eular.3971

AB0959

CONSUMPTION OF DAIRY PRODUCTS IN RELATION TO PRESENCE OF CLINICAL KNEE OSTEOARTHRITIS: THE MAASTRICHT STUDY

K. Denissen^{1,2}, A. Boonen^{2,3}, J. Nielen^{1,3,4}, A. Feitsma⁵, E. van den Heuvel⁵, P. Emans⁶, S. Sep^{7,8,9,10}, C. Stehouwer^{7,10}, M. van Dongen^{1,2}, P. Dagnelie^{1,2,10}, S. Eussen^{1,10}. ¹Department of Epidemiology; ²CAPHRI Care and Public Health Research Institute, Maastricht University; ³Department of Internal Medicine, Division of Rheumatology; ⁴Department of Clinical Pharmacy and Toxicology, Maastricht University Medical Center+, Maastricht; ⁵Friesland Campina, Amersfoort; ⁶Department of Orthopaedics; ⁷Department of Internal Medicine, Maastricht University Medical Center+; ⁸Department of Rehabilitation Medicine, Maastricht University, Maastricht; ⁹CAPHRI Care and Public Health Research Institute, Maastricht University, Amersfoort; ¹⁰CARIM School for Cardiovascular Diseases, Maastricht University, Maastricht, Netherlands

Background: Observational studies showed inverse associations between milk consumption and knee osteoarthritis (knee OA).^{1,2} There is lack of information on the role of specific other dairy product categories.

Objectives: To explore the association between dairy consumption and presence of clinical knee OA in individuals aged 40–75 year participating in the Maastricht Study.

Methods: Presence of clinical knee OA was defined according to a slightly modified version of the American College of Rheumatology (ACR) clinical classification criteria.³ Data on dairy consumption was appraised by a 253-item Food Frequency Questionnaire covering 47 dairy products with categorization on fat content, fermentation or dairy type. Multivariable logistic regression analyses were performed to estimate odd ratios (ORs) and 95% confidence intervals (95% CI), while correcting for relevant factors.

Results: Of the 3010 participants included in this study, 427 individuals (14%) were classified as having clinical knee OA. Significant inverse associations were observed between presence of clinical knee OA and intake of full-fat dairy and Dutch, primarily semi-hard, cheese, with OR for the highest compared to the lowest tertile of intake of 0.68 (95%CI 0.50–0.92) for full-fat dairy, and 0.75 (95%CI 0.56–0.99) for Dutch cheese. No significant associations were found for other dairy product categories.

Conclusions: In this Dutch population, higher intake of full-fat dairy and Dutch cheese, but not milk, was cross-sectionally associated with lower presence of clinical knee OA. Prospective studies need to assess the relationship between dairy consumption, and in particular semi-hard cheeses, with incident knee OA.

REFERENCES:

- [1] Kacar C, et al. Clin Exp Rheumatol. 2004;22(4):473–6.
- [2] Lu B, et al. Arthritis Care Res. 2014;66(6):802–9.
- [3] Altman R, et al. Arthritis Rheum. 1986;29(8):1039–49.

Acknowledgements: The authors thank all the voluntary participants from the Maastricht Study as well as the funding bodies.

Disclosure of Interest: K. Denissen: None declared, A. Boonen: None declared, J. Nielen: None declared, A. Feitsma Employee of: FrieslandCampina, a dairy company, E. van den Heuvel Employee of: FrieslandCampina, a dairy company, P. Emans: None declared, S. Sep: None declared, C. Stehouwer: None declared, M. van Dongen: None declared, P. Dagnelie: None declared, S. Eussen: None declared

DOI: 10.1136/annrheumdis-2018-eular.4686

AB0960

POLYORBIDITY AND COGNITION IN AMBULATORY POSTMENOPAUSAL HIP AND KNEE OSTEOARTHRITIS PATIENTS

A.A. Popov¹, N.V. Izmozherova², N.A. Getmanova². ¹Hospital Therapy Dept; ²Pharmacology and Clinical Pharmacology Dept., Ural State Medical University, Ekaterinburg, Russian Federation

Background: Osteoarthritis (OA) has been reported to be a risk factor of morbidity, disability and premature cardiovascular mortality.

Objectives: to assess the impact of polyorbidity on cognitive function in postmenopausal women with primary OA.