

prescribe HA IA therapy. *Data collected:* doctors characteristics and habits regarding HA IA injections use; patients demographic data and data on their knee OA: level of symptoms, radiological grade, other treatments prescribed. Statistics: descriptive: number (%), mean (SD).

**Results:** 275 rheumatologists from all areas of France participated into the study (aged 48 (8) years, 33% women). *HA IA injections use:* 20% of RH systematically propose HA injections to patients. 98% propose in case of a chronically painful knee OA, 96% to patients who cannot be operated, 86% after analgesics/NSAIDs have failed, 81% in front of an early knee OA. 74% prescribe even if there is a chondrocalcinosis. 67% perform injections after synovial fluid aspiration and steroids injection. 60% perform HA even in radiologically advanced OA. The choice of the HA preparation used relies on (by order of citations): reimbursement (important/very important for 73%), price (70%), availability (52%), clinical trials performed (50%), HA molecular weight (33%), preparation concentration (29%), a drug status (26%). It is mostly considered as a long term treatment (83%), but some RH use it as a treatment of a flare. Efficacy is assessed on symptoms and scored 60 (14) mm on a VAS by RH. The overall rate of post-injections side effects estimated by RH is 5%. *Patients description:* 523 patients were described, aged 67 (10) years, 65% women, mean weight 75 (13)kg and height 164 (10) cm, mean duration of symptoms 6 (5) years. 97% had a femoro-tibial knee OA (mostly medial) with a femoro-patellar OA in 49%. 88% fulfilled the ACR criteria. Mean pain score on a VAS was 55 (17) mm, 34% had awakenings at night and 74% morning stiffness. 62% had a knee effusion. 75% were unsuccessfully treated by analgesics/NSAIDs. Most of patients received analgesics and NSAIDs on the day of visit. 44% were at a Kellgren-Lawrence grade II and 38% at a grade III. 80% of patients with a synovial effusion had an aspiration before HA injection. 25% of patients had received a IA steroid injection during the previous month. 75% were treated by a lateral supra-patellar approach, 83% were prescribed a 24 hour post-injection rest. 96% of patients were informed of the possibility of a local painful post-injection reaction. 48% were prescribed an analgesic, 28% an NSAID, 13% a physical therapy on the same day.

**Conclusions:** HA IA injections are widely used by RH. 98% use them frequently, even sometimes as 1<sup>st</sup> line therapy. Patients to whom this treatment is prescribed suffer from painful medial femoro-lateral knee OA, with a high pain level despite analgesics and/or NSAIDs. The level of reimbursement and price are the 2 main criteria for choosing the HA preparation used. *This study was financially supported by Expanscience Laboratories (Courbevoie, France)*

## P237

### NUTRITION AND OSTEOARTHRITIS OF KNEE IN POSTMENOPAUSAL WOMEN

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**Purpose:** There are a literature data about possible influence of some nutrients on the development and progressing of knee osteoarthritis. It was shown, that the patients with low level of vitamin C in their blood had a triple progressing risk of osteoarthritis. Famous properties of vitamins E and A also give a possibility to think about their role in progressing of osteoarthritis. The patients with low concentration of vitamin D in feeding ration have a raised risk of knee osteoarthritis. The purpose of this study was to determine the relationship of consumption of different nutrients in feeding ration of postmenopausal women and incident and stage of knee osteoarthritis.

**Methods:** Influence of diets on development and progressing of knee osteoarthritis was investigated in 133 postmenopausal

women. A diagnosis of osteoarthritis was performed along the criteria of American rheumatology association (1995), its stage - by Kellgren-Lourenz classification.

**Results:** We did not found the differences in contents of most macro- and micronutrients in depend of incident and stage of osteoarthritis, however it was a tendency in consumption of some microelements and vitamins. The patients with OA compared with control group have a more level of  $\beta$ -carotin ( $F=2.64$ ,  $p=0.11$ ), folacin ( $F=2.94$ ,  $p=0.09$ ), less level of vitamin D (accordingly  $0.33 \pm 0.04$  and  $0.53 \pm 0.06$ ;  $F=6.51$ ,  $p=0.01$ ). We have not founded the differences in consumption of vitamin C ( $F=1.96$ ,  $p=0.16$ ), vitamin A ( $F=0.05$ ,  $p=0.83$ ) and E ( $F=0.85$ ,  $p=0.36$ ) in patients dependency on presence of arthritis. The tertiles analysis showed that frequency of knee osteoarthritis in women in first tertile was 48,9%, fourth tertile - 22,7%. We have not founded the differences in consumption of all macro- and micronutrients in depend of stage

**Conclusions:** Our results shows that in the feeding ration of postmenopausal women with gonarthritis there are significant more level of vitamin D and diminished level of some microelements and vitamins, that can contribute to its progressing.

## Genetics and Genomics

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#### DIFFERENTIAL EXPRESSION OF LEPTIN AND LEPTIN'S RECEPTOR ISOFORM (Ob-Rb) mRNA BETWEEN ADVANCED AND MINIMALLY AFFECTED OSTEOARTHRITIC CARTILAGE

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**Purpose:** Our study aimed to investigate the contribution of leptin to the pathophysiology of osteoarthritis (OA), a common degenerative joint disease, and explore leptin's effect on chondrocytes cultures.

**Methods:** Articular cartilage samples were obtained from femoral heads, femoral condyles and tibial plateaus of patients with primary OA undergoing hip or knee replacement surgery at the Orthopaedics Department of University Hospital of Larissa. A total of 15 patients were included in the study. RNA was isolated using Trizol reagent and was further purified. mRNA expression levels of leptin and Ob-Rb were measured by real-time quantitative RT-PCR (Light Cycler Instrument, Roche Molecular Systems, Alameda, CA).

Primary chondrocytes cultures, normal and osteoarthritic, were stimulated with leptin (0-100ng/mL) and cell proliferation as well as leptin-induced IL-1 $\beta$  production were measured, by the use of an MTT assay and a commercially available ELISA kit respectively. Serum and SF leptin concentrations were also measured with ELISA technique.

**Results:** An intrajoint differential expression of leptin and Ob-Rb mRNA was observed between advanced and mild OA cartilage; a statistically significant increase in leptin mRNA expression was observed from the mild ( $0.066 \pm 0.069$  leptin copies/PBGD copies) to the severely ( $0.21 \pm 0.095$  leptin copies/PBGD copies) damaged OA cartilage ( $t(13)=6.265$ ,  $p<0.001$ ). When matched paired analysis of the samples was performed, a statistically significant increase in Ob-Rb mRNA was observed from the mild ( $0.018 \pm 0.031$  Ob-Rb copies/PBGD copies) to severe damaged OA cartilage ( $0.194 \pm 0.178$  Ob-Rb copies/PBGD copies). We also observed significantly higher mean leptin mRNA expression in obese patients ( $0.294 \pm 0.039$  leptin copies/PBGD copies) compared to normal weight patients ( $0.1 \pm 0.02$  leptin copies/PBGD copies). Leptin's mRNA expression levels in