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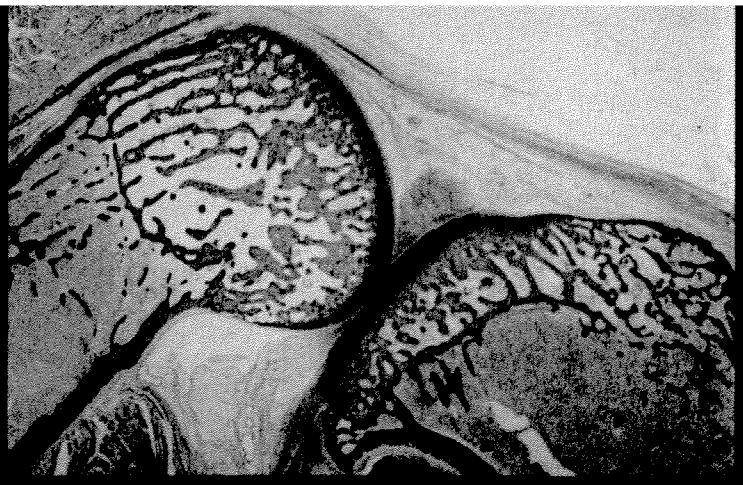

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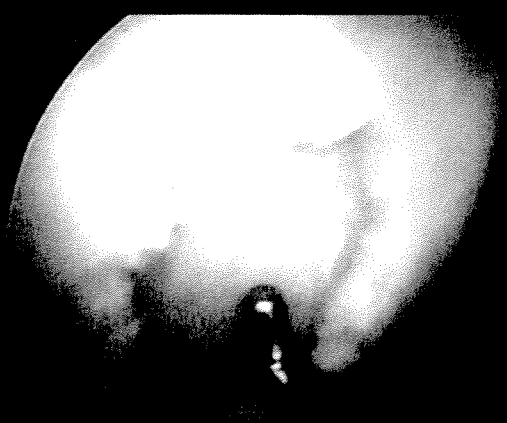
Osteoarthritis and Cartilage

OARSI OSTEOARTHRITIS RESEARCH SOCIETY INTERNATIONAL

Abstracts presented at the 10th World Congress and OARSI Membership Directory



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Results: 4719 patients (88.6%) were analysed (2781 with knee, 1553 with hip, and 385 with hip and knee osteoarthritis). Mean scores of the WOMAC (range 0-100) were 48.7±17.9, 47.2±17.4, and 52.2±17.5 for the 17, nine, and eight item-versions respectively. We observed no difference in mean scores between knee and hip osteoarthritis. For the three versions of the questionnaire, the Cronbach coefficient values were high (0.96, 0.91, and 0.92 respectively). For each osteoarthritis location, factor analysis of the 17-item version extracted two similar factors which could not be clinically characterised, explaining 67% of the total variance for hip OA and 63% of the total variance for knee OA. Factor analysis of the nine-item version extracted one factor explaining 60% of the total variance for knee and two factors (which could not be clinically characterised) explaining 72% of the total variance for hip osteoarthritis. The eight-item version was one-dimensional for knee and hip OA, explaining 61.0% and 61.5% of total variance. The mean scores of the three WOMAC versions were highly correlated but were weakly correlated with pain scores (r values between 0.42 and 0.53).
Conclusions: Mean scores of the 3 versions of the WOMAC questionnaire, section C are highly correlated, but the eight-item version has the advantage of being one-dimensional for both locations of the disease. Disability assessed by the WOMAC questionnaire is similar for both hip and knee osteoarthritis.

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EXPECTATIONS OF TREATMENT IN PATIENTS 50 YEARS OR OLDER WITH OSTEOARTHRITIS OF THE KNEE

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Introduction: There are many treatment pathways for osteoarthritis of the knee; however the outcome may not match the patient's expectations. The purpose of this study was to identify the expectations of treatment in patients with osteoarthritis of the knee.
Methods: A 20 item validated knee surgery expectation survey was completed by 130 individuals, 50 years or older, who were diagnosed with knee osteoarthritis. There were 54 women and 76 men with a mean age of 63 years(range 50 - 91).
Results: Avoid future knee degeneration was the most common expectation rated very important(85%), followed by improve ability to maintain health(79%), have confidence in knee(69%), and improve ability to walk(69%). The least common expectation was for the knee to be back to way it was before the problem started, followed by improve ability to run. Gender was associated ($p<0.05$) with the following expectations: avoid future degeneration(more important to females), improve ability to do stairs(more important to females), improve ability to kneel(more important to males), and stop knee from giving way when stopping quickly(more important to males). Age was associated ($p<0.05$) with pain relief(more important to younger) and improve ability to participate in sport(more important to younger). Improve ability to maintain health was more important to older individuals, as was avoid future degeneration of the knee.
Conclusions: Patient expectations are influenced by age and gender. These differences are important in clinical decision making. Further understanding of patients' expectations of treatment may improve treatment outcome and patient satisfaction.

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CHONDROITIN SULFATE: A NOVEL SYMPTOMATIC TREATMENT FOR PSORIASIS. REPORT OF ELEVEN CASES

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Aim of study: After observing that three patients with both knee osteoarthritis and psoriasis treated with chondroitin sulfate experienced a marked improvement of skin lesions, we decided to study more cases due to the encouraging preliminary results. Here, we describe the clinical and histopathological results of eleven patients with both osteoarthritis and psoriasis treated with oral chondroitin sulfate.
Methods: Eleven adult patients with knee osteoarthritis and long-standing moderate to severe psoriasis resistant to conventional therapy received 800 mg/day of chondroitin sulfate (Bioiberica S.A., Barcelona, Spain) for two months. Skin biopsies were obtained before and after treatment.
Results: Clinically, all patients but one presented a dramatic improvement of the condition of the skin with a reduction of swelling, redness, flaking, and itching, increase in the hydration and softening of the skin, and amelioration of scaling. One patient experienced clearance of psoriasis. Histopathologically, there was a statistically significant decrease in epidermal thickness (-29%), a decrease in the thickness between the stratum basale and the stratum granulosum (-31%), a significant improvement of the degree of psoriasis activity (-49%), and a decrease in the keratinocyte proliferation index (-27%). The substitution of parakeratotic keratinization by orthokeratotic keratinization was also observed.
Conclusions: The administration of chondroitin sulfate resulted in a marked improvement of the psoriatic lesions. Therefore, the confirmation of these findings in controlled prospective studies could represent an important advance in the therapeutic armamentarium for patients with psoriasis given the excellent safety profile of chondroitin sulfate.

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OSTENIL MINI COMPARED TO DEPOMEDRONE FOR BASE OF THUMB OSTEOSRTHRITIS - A RANDOMISED CONTROLLED PILOT TRIAL

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Aims: To compare the effectiveness of Ostenil Mini (a Sodium Hyaluronate designed specifically for small joint Osteoarthritis) to a standard injection of Depomedrone for base of thumb arthritis.
Methods: After obtaining ethical approval 20 patients were recruited from the Rheumatology and Hand clinics at a busy district general hospital and gave consent to be included in the trial. Patients received either an injection of Depomedrone or an injection of Ostenil mini. Due to bilateral disease there were 23 injections, 10 of Depomedrone and 13 of Ostenil mini. Most patients were female; 2 males, and only 2 were left-handed, both of these had isolated left sided disease. Each patient was assessed prior to the injection using the Patient Rated Wrist Evalua-

tion (PREW) questionnaire and the Short Form 36 questionnaires as well as physical measurements of power grip and pinch grip to both hands were recorded. Subsequent assessment with the PREW at 6 weeks and all the questionnaires and measurements repeated at 3 months following the injection.
Results: Asked to rate the overall effectiveness of the injection (useless, poor, fair, good or excellent): 8 out of 13 of the Ostenil group gave ratings of good or excellent (2 poor and 3 fair). Of those receiving the Depomedrone only 4 out of 10 rated the injection as good (none rated excellent, 3 fair and 3 useless). The clinician performing the injections noted the patients' comments at the time of injection and not only were the injections themselves less painful but the post-injection discomfort was less in the Ostenil group.
The majority of both groups scored worse with the PREW at post-injection assessments despite rating their outcomes as mainly good in the Ostenil group. The SF-36 proved largely inconclusive, most patients were affected by polyarthropathy and this seemed to have a significant influence over patients' answers.
The power and pinch grip measurements were complex to interpret; between a third and a half of both groups had less strength 3 months following the injection, two of them who both had Ostenil bilaterally scored better on one side and worse on the other. All the results are analysed and presented in detail.
Conclusions: Ostenil mini scored higher in patient general satisfaction and was less painful both at the time of injection and in the post-injection period. Questionnaires and physical measurements were largely inconclusive. Neither group had any serious complications.

P158

A SIGNIFICANT IMPROVEMENT OF WOMAC AND LEQUESNE INDEXES AFTER TREATMENT WITH RALOXIFENE IN WOMEN WITH KNEE OSTEOARTHRITIS

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Resorption and bone formation are the processes strictly linked to each other. The inhibition of osteoclast activity causes simultaneous inhibition of recruitment and maturation of osteoblasts. Osteoarthritic subchondral osteoblasts due to RANK activation by RANKL would be responsible for articular cartilage degeneration in certain conditions as a result of proinflammatory cytokines overproduction.
A phenomenon of simultaneous increase in bone resorption and intensification of clinical symptoms of degenerative disease in women soon after their ovaries ceased to function is understandably interesting. Thus, the role of estrogens in both processes should be checked thoroughly. They are able to act through receptors, which appear in osteoblasts, osteoclasts, and chondrocytes. It is similar to the cases of specific modulators of estrogen receptor (SERM), which affect the same receptors in the bone and cartilage. At the same time, we revealed the inhibition of cartilage degradation marker excretion (CTX-II/Cr) influenced by RLX 12-month-treatment in women with knee osteoarthritis (OAK). The influence of estrogen replacement therapy in inhibition of OA progress in post-menopausal women has been documented well but a similar effect of SERM drugs, specifically the best known so far RLX, awaits investigation.
The aim of the study was the evaluation of clinical algo-functional parameters of WOMAC and Lequesne indexes before and after 12 months of Raloxyfene (RLX) therapy.
The study was carried out in the group of 65 women, aged 52-79 years, mean 65.4 years, with diagnosed (according to ACR criteria and rated on a 3-point of Kellgren and Lawrence score) knee osteoarthritis, with low bone mass (BMD of Hip and/or L2-L4 vertebrae T-score between −1.0 and −2.5), without contraindications to be treated with RLX. Patients were randomly assigned to the control (C) or to the examined group (E) being treated with 60mg of RLX. All participants took Calcium up to 1200mg and 800I.U. of Vitamin D3 and Tramadol 1-2x50mg/24hr in case of pain. Clinical evaluation of knee symptoms was based on WOMAC and Lequesne indexes.
The results pointed to a significant improvement of WOMAC index ($p=0.002$). Lequesne test's results were on the border of significance ($p=0.05$) and testing level of probability for CTX-II/Cr and WOMAC correlation was $p=0.058$.
Conclusion: Raloxifene administered to women with OAK for 12 months caused the decrease in cartilage degradation with simultaneous clinical improvement, measured with WOMAC index and, to a smaller extent, with Lequesne one. Thus, it proves Raloxifene to have antiosteoarthritic effect.

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PATIENT-SPECIFIC COMPUTER MODELING OF DEGENERATION PROPENSITY DUE TO ABERRANT CONTACT STRESS EXPOSURE FOLLOWING INTRA-ARTICULAR FRACTURE OF THE ANKLE

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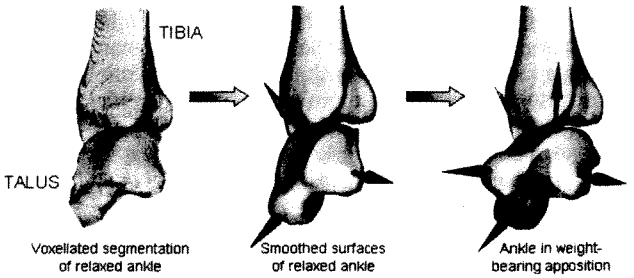
Aim: Using finite element (FE) computer models of intact and fractured ankles from patients, we aim to characterize degeneration propensity due to aberrant contact stress exposure following intra-articular fracture of the ankle. This is approached by patient-specific analysis of cumulative cartilage mechano-stimulus attributable to habitual functional activity.
Methods: CT scans of human ankles (6 surgically reduced tibial plafond fractures and 7 intact contralaterals) were segmented to delineate bony margins. Each bone surface was projected outward to create a second surface, with the intervening volume then meshed with continuum hexahedral cartilage elements. The tibia was positioned relative to the talus into a weight-bearing apposition.



Articular members were first engaged under light preload, then plantar-/dorsi-flexion kinematics and resultant loadings were input for serial FE solutions at 13 instants of the stance phase of level walking gait. Cartilage stress histories were post-processed to recover distributions of cumulative stress-time mechano-stimulus, a metric of degeneration propensity.
Results: Computed contact stress distributions for intact ankle joints were continuous and relatively uniform over the contact patch, which was relatively consistently located on the tibial articular surface. The average peak computed contact stress was $11(\pm 1)$ MPa for intact ankles (consistent with previous experimental cadaveric recordings), and $14(\pm 2)$ MPa in fractured ankles. Consistency in computed contact stress exposures for intact