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TREATMENT OF KNEE OA WITH ACETAMINOPHEN (3-4gr/day) DURING 12 MONTHS: A NATURALISTIC PROSPECTIVE STUDY

C. Fernández-López[1], N. Oreiro[1], M. Freire[1],
M. Bonome-González[2], S. Reboiro[1], J. Fernández-Sueiro[1],
F. Galdo[1], **F.J. Blanco**[1]
[1]*Rheumatology Division. Clinical Research Unit, CH Universitario Juan Canalejo, Coruña, Spain;* [2]*Centro Salud de Matogrande, Coruña, Spain*

Purpose: Osteoarthritis (OA) is the more common rheumatic diseases. Acetominophen (3-4 gr/day), is a therapeutic alternative to treat symptomatic knee OA. Effectiveness and security data from long term studies using acetominophen in naturalistic conditions is scarce.

To study the security and effectiveness data of acetominophen at doses of 4gr/day in real conditions during 6 and 12 months.

Methods: This observational, naturalistic, open and prospective clinical trial was conducted in a Spanish rheumatology clinic. All included patients were treated with acetominophen at doses of 4gr/day during the first 6 months, and then doses were regulated according symptoms of patients. Visits were performed at 3, 6, 9 and 12 months. Pain EVA and WOMAC were employed to quantify effectiveness. Data from security were also recorded.

Results: 219 patients were included: 87.4% females, age 65.5 ± 8.76 years and BMI 32.9 ± 5.3. Duration of knee OA was 49.9 ± 63.4 years. Baseline WOMAC values were: Pain = 6.9 ± 2.8, Stiffness = 3 ± 1.7, Function = 25 ± 11.7. Baseline pain-EVA was 46.1 ± 21.4. Knee OA was bilateral in 93.0% of patients. 178 patients complete the protocol at 6 months and 139 patients at 12 months. Pain-EVA [media (95% IC)] at 6 months was 37.1 (33.9-41.6) and 38.1 (33.9-42.2) at 12 months (p=0.01 and p<0.001 respectively). WOMAC values at 6 months were [media (95% IC)]: Pain = 6.6 (6.1-7.2), Stiffness = 2.7 (2.5-3.0), Function = 24.0 (22.2-25.8). WOMAC values at 12 months were: Pain = 6.4 (5.8-6.9), Stiffness = 2.8 (2.5-3.1), Function = 24.9 (23.0-26.9). At 6 and 12 months 42.9% and 40.3% of patients were responders according OARSI criteria. Two hundred forty adverse events were reported, 76% of them were low level adverse events. The most frequent adverse event was infections of respiratory tract. Eight adverse events were classified as severe, 2 of them were hepatotoxic adverse events and acetaminophen was dropped.

Conclusions: In naturalistic conditions, acetaminophen at doses of 3-4gr/day reduces pain in patients with knee OA and it is a secure drug.

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INHIBITION BY HYALURONAN OF COLLAGENASE PRODUCTION THROUGH NUCLEAR FACTOR-κB DOWN-REGULATION IN OSTEOARTHRITIS CHONDROCYTES STIMULATED WITH COOH-TERMINAL HEPARIN-BINDING FIBRONECTIN FRAGMENT

T. Yasuda
Department of Sports Medicine, Tenri University, Tenri, Japan

Purpose: Increased fibronectin fragments are thought to be involved in cartilage destruction in osteoarthritis (OA) through their catabolic activities. At present, whether fibronectin fragments can activate nuclear factor (NF)-κB in OA chondrocytes remains unknown. In addition, hyaluronan (HA) effect on fibronectin fragment-activated intracellular pathways remains to be clarified. This study was aimed to examine the inhibitory effect of HA on collagenase production through NF-κB activation by COOH-terminal heparin-binding fibronectin fragment (HBFN-f) in OA chondrocytes.

Methods: OA cartilage was harvested from knee joint at replacement surgery, and chondrocytes were kept in monolayer or cartilage explant cultures in the presence of HBFN-f. Secreted levels of matrix metalloproteinase (MMP)-1 and MMP-13 in conditioned media were determined by immunoblot analysis. NF-κB activation and nuclear translocation were evaluated by immunoblot analysis. Cultures were pretreated with 2700 kDa HA to evaluate the inhibitory effect on HBFN-f action.

Results: HBFN-f enhanced MMP-1 and MMP-13 in OA cartilage explant culture. The specific NF-κB inhibitor, BAY11-7085 confirmed the requirement of NF-κB for collagenase induction by HBFN-f. HBFN-f activated NF-κB, leading to NF-κB nuclear translocation in OA chondrocyte monolayer culture. Pretreatment with HA resulted in significant suppression of NF-κB phosphorylation and nuclear translocation by HBFN-f. HA also inhibited HBFN-f-stimulated production of MMP-1 and MMP-13 in OA cartilage explant culture.

Conclusions: The present study clearly demonstrated that HBFN-f activated NF-κB in OA chondrocytes, while high molecular weight HA inhibited such activation. When HA is therapeutically introduced into OA joints, therefore, HA could suppress the catabolic actions of fibronectin fragments like HBFN-f as a potent NF-κB inhibitor.

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APPLYING THE HERBAL THERAPY ROSE-HIP IN OSTEOARTHRITIS PATIENTS: A SYSTEMATIC REVIEW AND A META-ANALYSIS

R. Christensen Sr.[1], H. Lund[1], E. Bartels[2], A. Astrup[3],
H. Bliddal[1]
[1]*The Parker Institute, Frederiksberg, Denmark;* [2]*Copenhagen University Library, Copenhagen, Denmark;* [3]*Department of Human Nutrition, Copenhagen, Denmark*

Purpose: To give a systematic review, with a quality assessment and meta-analysis of clinical trials, of rose-hip supplement (a herbal remedy) for knee and/or hip OA symptoms.

Methods: The bibliographical databases PubMed, EMBASE, CINAHL, Scopus, Scifinder, Web of Science, and PEDro, as well as The Cochrane Controlled Trials Register and Scirus, were searched for randomised controlled trials (RCTs) of subjects with (knee or hip) osteoarthritis (OA) - using the terms: osteoarthritis, osteoarthrosis, degenerative arthritis - combined with rose-hip, rosa canina, ros* AND herb*, "hyben vital", "Litozin". We also did a manual search of reference lists in review articles, manuscripts, and supplements from rheumatology and OA journals. Inclusion, quality scoring, and data abstraction were performed systematically by 2 independent reviewers. Outcome data were extracted for pain and disability. For each included trial, the number of responders was estimated, and standardised mean difference was calculated as the Effect Size (ES) for pain, and disability based on the corresponding relevant z-statistics. We calculated Odds Ratio's (OR) for the number of patients responding to treatment, supported by the Number Needed to Treat (NNT) for clinical response. For the meta-analyses we used a (SAS) mixed linear model, but applied a restricted maximum likelihood (REML) method.

Results: A total of four RCTs, including two with a cross-over design, were eligible for meta-analysis. This included 360 patients with symptomatic knee and/or hip OA; 229 of these patients were allocated to rose-hip supplement treatment. The studies had an arithmetic mean quality score of 3.90 (78.1% max). All three outcomes - pain, disability, and number of responders - seemed homogenous (P>0.17), supported by the I-square: 39.5%, <0%, and 37.5%, respectively (indicating consistency). Based on the