Conclusions: This open-label study shows that i.a. HA injection for TMJ OA leads to a significant improvement in all the investigated parameters, which is still present after six months from baseline. There are currently two broad categories proposed for the mechanism of action by which HA may elicit short-and long-term pain relief: rheological or biomechanical (anti-inflammatory, analgesic, chondroprotective and anticitabobal) effects through interactions between HA and its receptors CD44, RHAMM, ICAM-1. It is possible that one of the functions of CD44 in stem cells may be to facilitate the endocytosis of HA which then may act as a protector of their DNA from oxidants. Our study confirms that i.a. injections of HA in TMJ are easily administered, and may give symptomatic benefit with minimal side effects.

347 CHRONIC EFFECTS OF A FLEXIBLE AND MINIMALIST FOOTWEAR ON CLINICAL, FUNCTIONAL AND GAIT BIOMECHANICAL ASPECTS IN THE KNEE OSTEOARTHRITIS: A SINGLE-BLIND RANDOMIZED CLINICAL TRIAL
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Purpose: Recent studies have shown that the acute use of shoes that mimic barefoot gait decrease substantially knee loads while walking in elderly with knee osteoarthritis (OA). Probably due to methodological difficulties to implement this type of conservative treatment during extended period, the effectiveness of minimalist footwear has not been evaluated yet in elderly patients with knee OA. The purpose is to describe a randomized clinical trial protocol for evaluating the therapeutic effect of a minimalist (flexible, non-heeled) and inexpensive footwear on clinical, functional, and biomechanical gait in elderly women with knee OA.

Methods: Fifty six elderly women with knee OA grade 2 or 3 (Kellgren and Lawrence) will be randomized in blocks and allocated in the intervention group that will use a flexible, non-heeled and inexpensive footwear on clinical, functional, and biological (anti-inflammatory, analgesic, chondroprotective and anticitabobal) effects through interactions between HA and its receptors CD44, RHAMM, ICAM-1. It is possible that one of the functions of CD44 in stem cells may be to facilitate the endocytosis of HA which then may act as a protector of their DNA from oxidants. Our study confirms that i.a. injections of HA in TMJ are easily administered, and may give symptomatic benefit with minimal side effects.

Epidemiology & Health Services Research

349 HORMONE REPLACEMENT THERAPY PREVENTS FAILURE AFTER TOTAL KNEE (TKA) AND HIP (THA) ARTHROPLASTY: A POPULATION-BASED RETROSPECTIVE COHORT STUDY
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Purpose: Rates of primary total knee (TKA) and hip (THA) arthroplasties are increasing worldwide. Together with patient reported outcomes, implant survival is an important element in the evaluation of joint replacement surgery. There is an urgent need to identify potential interventions to improve implant outcomes. Hormone replacement therapy (HRT) might minimise osteolysis and loosening through its anti-resorptive effects, and hence improve prosthesi survival.

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Purpose: To compare and describe the effects of peri-articular hyaluronic acid (HA) coadministered with botulinus toxin (Botox) versus placebo in lateral epicondylitis.

Methods: 28 patients with elbow pain longer than two weeks and less than 12 months, particularly exacerbated during resisted dorsiflexion of the wrist with the elbow in full extension with a VAS score > 4.5 cm on a 0-10 cm VAS were included. Assessments were done at baseline, days 7, 14, 30 and 90. Efficacy measures included patient’s visual analogue scale (VAS) of pain at rest (0-100 mm) and following assessment of grip strength (0-100 mm). Grip strength was determined using a jamar hydraulic hand dynamometer. Other assessments included patients’ global assessment of elbow injury (5 point categorical scale; 1 = no disability, 5 = maximal disability), patients’ assessment of normal function/activity (5 point categorical scale), patients/physician satisfaction assessment (10 point categorical scale), and adverse events as per WHO definition. Differences between groups were determined using an intent-to-treat ANOVA. After outcome assessment, patients were randomized to treatment with a single injection of: HA + Botox (0.7 cc HA + 40 units Botox), HA alone (0.7 cc), Botox (40 units), placebo (normal saline 0.7 cc). Injections were done free-hand into the origin of the extensor carpi radialis brevis (ECRB).

Results: All patients completed the trial. Adverse events included pain and swelling in one patient in the HA group at day 7 and ECRB weakness for 48 hours in one patient in the Botox group following injection. At 7 days, a significant improvement (p<0.05) from baseline and versus placebo in VAS pain at rest and following grip testing was observed in all three treatment groups. Grip strength was greater (p<0.05) for HA+Botox vs other groups at 14, 30 and 90 days. Further, HA+Botox showed small but significant patient perception of normal function versus HA or Botox at one month (p<0.05). However, at 90 days, HA+ Botox showed significantly (p<0.03) greater physician satisfaction versus all other groups. There were no differences in patient global satisfaction between treatment groups at 7 or 90 days, but HA + Botox showed greater satisfaction at 14 and 30 days.

Conclusion: Peri-articular HA + Botox produced superior clinical and statistical improvement in short- and long-term pain and function compared to placebo and Ha or Botox alone with serious adverse effects.