

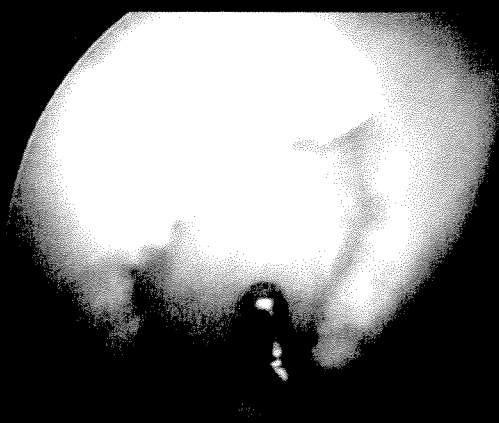
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hip arthroplasty. Cells were cultured in DMEM with 10% FCS containing CS (1-100 µg/ml) with medium change every 2 days. After 4 days, culture medium was replaced with serum free DMEM containing 1% ITS with or without IL-1β (1 ng/ml) and then, the incubation was further continued for 24 or 48 h. At the end of experiments, culture medium was harvested for HA assay, using an ELISA-like method. RNA was isolated and reverse transcribed to cDNA, which was then subjected to the relative quantitative real-time PCR (Q-RT-PCR) procedure, using the ABI PRISM 7000 and SYBR green detection and specific primers for hyaluronan synthases (HAS) 1, 2 and 3 and UDP-glucose dehydrogenase (UGDH). RT-PCR data were normalized with GAPDH mRNA and gene expression relative to control was calculated with the delta delta cycle to threshold (ddCt) method.

Results: IL-1β was found to dramatically increase HA production by synoviocytes and articular chondrocytes. CS stimulated HA production by these cells, in a dose and time dependent manner. The effect of CS was observed for both basal and IL-1β induced HA levels. The cytokine increased mRNA expression of HAS1 and HAS2 in the two cell types, with greater effect on HAS1 than HAS2 whereas CS induced equivalent stimulation on both genes. As for HA production, the effect of CS on HAS1 and HAS2 expression was observed for basal and IL-1β induced expression. UGDH expression was stimulated by IL-1β in chondrocytes only. CS stimulated basal and IL-1β induced mRNA expression of UGDH in both synoviocytes and chondrocytes. Expression of HAS3, rather implicated in synthesis of low molecular HA species, was found to be stimulated by IL-1β in the two articular cells. Interestingly, CS inhibited HAS3 expression and repressed the IL-1β induced stimulation of this gene in chondrocytes. Work is in progress to determine the molecular size of HA produced in these experimental conditions.

Conclusion: CS enhanced HA production by articular cells. The effect is associated with concomitant increase of UGDH, HAS1 and HAS2 mRNA expression. In contrast, the expression of HAS3, the enzyme involved in synthesis of low molecular forms of HA is depressed by CS. These findings suggest that CS could exert its beneficial effect on OA symptoms through increased HA release in the synovial fluid and enhanced aggregating potential for cartilage proteoglycans.

P153

HYALURONAN VS. STEROID INJECTION FOR SUBACROMIAL IMPINGEMENT OF THE SHOULDER

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Aim: The aim of this study was to compare a synthetic Hyaluro-

nan (OstenilTM) to a corticosteroid injection (Depomedrone) for primary subacromial impingement of the shoulder.

Methods: In a retrospective review, thirty one patients with primary subacromial impingement of the shoulder were randomly given either a 40mg Depomedrone injection or Ostenil injection. No patients had undergone previous surgery. All had physiotherapy following the injection. Patients were given a Pain Diary with a ten point analogue scale to complete.

Results: There was no difference between the two groups with regard to age and sex.

Both steroid and Ostenil reduce the pain score in the first two to four hours post-injection, but in the Depomedrone group the pain score increases significantly from 12 hours to 2 days post-injection. This effect is not observed with Ostenil. This difference is significant ($p < 0.05$) between 18 hours and 3 days post-injection. From 4 days the pain score is similar, with an equal reduction in pain in the two groups.

Conclusions: Ostenil Hyaluronan appears to be as effective as Depomedrone in reducing subacromial impingement pain, but does not produce the pain surge associated with Depomedrone in the first few days post-injection.

P154

CONSTRUCT VALIDITY OF THE FUNCTION SECTION OF THE WOMAC QUESTIONNAIRE: THE ARTHRITIS SURVEY

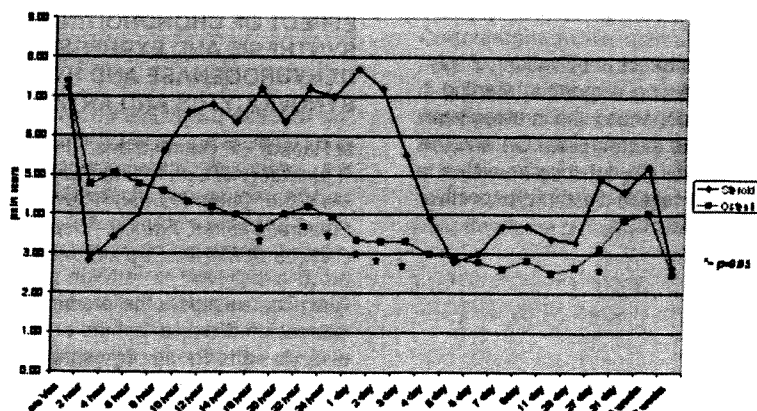
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Background: The WOMAC questionnaire has three sections: pain, stiffness, and function. The original function section (section C) has 17 items but shortened versions with eight and nine items have recently been proposed.

Aims: To assess and compare construct validity of the 17, nine, and eight-item versions of the WOMAC questionnaire.

Methods: In a cross sectional national survey, 1811 GPs enrolled 5324 patients with hip and/or knee osteoarthritis (OA). Pain at rest and during activities, and mean pain for the previous eight days were recorded on a 11-point numeric scale, and function was assessed using the 17, nine, and eight item-versions of the WOMAC, section C. Construct validity was assessed using the Chronbach coefficient, and factor analysis followed by orthogonal rotation. Coefficient correlations between mean scores were determined with Spearman's rank correlation coefficient.



Abstract P153 – Fig. 1. Mean VAS scores over time.