

Evaluation of Hyaluronan Formulation for Chondroprotection in Osteoarthritis

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Eight-week-old mice were anesthetized and subjected to a stifle instability surgery. Briefly, surgery of the left stifle joint involves a complete removal of the medial meniscus followed by transection of the cranial cruciate ligament. This instability model of monoarthritis is known to produce a progressive yet predictable osteoarthritis (OA). After surgery mice were randomly assigned to either of two groups: Group A received saline, while Group B received saline in which CSG's Trixsyn® hyaluronan formulation (1 mg HA/kg body weight) was dissolved. Administration was by gavage once per day for five days per week. Once the progress of the OA was verified, at five weeks post-surgery, all remaining animals were euthanized. Stifle joints were harvested, fixed and decalcified. The decalcified joint was sagittally sectioned through the medial side of the joint and stained with safranin O. Scoring of tissues was according to the grading and staging protocol of Pritzker et al. (*Osteoarthritis Cartilage* **14**, 13 (2006)). At five weeks, animals in Group A showed complete denudation of articular cartilage on greater than 50% of the articular surfaces, along with bone remodeling, with a score of 24 for each individual; all animals in Group B showed considerable preservation of articular cartilage, with a score of 6 or less for each individual. **It is concluded that CSG's Trixsyn® hyaluronan formulation is protective of articular cartilage in an established model of osteoarthritis.**