

Grade 3 (T1rho+) Chondromalacia Patella (CMP) Can be Persistently Asymptomatic if Joint Homeostasis is Achieved and Maintained: Clinical Implications

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Summary:

We have shown that even T1rho+ CMP can be persistently Asymptomatic, and therefore such a cartilage lesion May Not be the source of symptoms, but, in fact, an incidental finding.

Abstract:

Purpose: This is a unique long-term (17 yr) follow up report on bilateral, persistently asymptomatic Grade 3 CMP that is non-progressive and metabolically stable, And Yet, T1 rho+.

Methods and Materials: This is a 17year follow up study (the author, currently age 67,) who underwent arthroscopic inspection of both asymptomatic knees at time zero without intra-articular anesthesia (in which bilateral grade 3 CMP was incidentally discovered to be present without sensation even to direct probing) At 15 years post-op, a T1 rho MRI study was performed, and at 16 years post-op, a repeat Tc bone scan was performed. Reports of his subjective sensation throughout the 16 year time span were documented.

Results: The subject reported no PF Pain At ANY Time, during the 17 years. The Tc99m- MDP bone scan studies performed at time zero and at 16 years post-op were completely normal (indicating the presence of Osseous/Joint Homeostasis) The T1 rho study performed at 15 years post-op was 3+ abnormal (indicating substantial diminishment in proteoglycan content) in the geographic region of the bilateral Grade 3, but Asymptomatic, CMP.

Conclusions: Even advanced Grade 3 CMP can exist Asymptotically without progression and be metabolically stable (bone scan negative - an objective, metabolic marker of Joint Homeostasis) for extended periods of time. The + T1 rho study does not likely represent pathology, but rather, Normal, asymptomatic, age-related changes (diminished proteoglycan content) - that probably exists in Vast numbers in this advanced middle-aged population.

Clinical Implications: The results of this study have potentially profound implications for orthopedic surgeons, researchers, radiologists, and physical therapists to be Extremely Cautious to Not "Over-interpret" the MRI finding of a + T1 rho lesion in this clinical setting (Middle-Aged) as necessarily "pathological" and therefore serving as a rationale for aggressive cartilage-oriented operative procedures in a symptomatic patient - Where the Actual Etiology of the perceived PF pain may well be due to factors completely unrelated to the articular cartilage: (e.g.: transient synovial soft-tissue impingement, and/or intra-osseous hyper-pressure, etc.).