



Contemporary Research Areas in Sports Medicine

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Editorial

I am currently focusing on sports medicine research-specifically: outcomes-based investigations to evaluate the utility of certain procedures, innovative surgical techniques, and biomarker diagnostic/therapeutic potential.

Meniscal root repair surgery has gained favor in the past 10-15 years as a means to save the meniscus and theoretically slow cartilage degeneration. Given the relative novelty of the procedure, we wanted to investigate our own patient cohort and determine the actual benefit of the procedure. In a recently submitted study, despite improved patient subjective findings (consistent with previous studies); we did appreciate a functionally restored meniscus on follow-up MRIs, indicating the procedure may not be as beneficial as hoped [1].

Although anterior cruciate (ACL) ligament reconstruction using the anteromedial (AM) portal has an excellent success rate, femoral tunnels drilled through the AM portal may be shorter than desired, and requires hyper flexion of the knee [2]. A retrograde drill allows for inside-out drilling, thus circumvents both these problems; however, it was unclear if this tool could produce tunnels at an angle that would allow collinear interference screw placement. In a now published cadaver experiment, we demonstrated one could use the retrodrill with screw fixation and achieve minimal divergence [3]. We continue to study the feasibility of this technique and plan to move to a clinical investigation.

Despite the remarkably good clinical and functional outcomes of ACL reconstruction, a large number of patients still go on to develop post-traumatic osteoarthritis [4]. To find a possible cause, we evaluated different inflammatory biomarker concentrations in three groups of patients: patients with ACL injures and cartilage damage, patients with ACL injuries and no cartilage damage, and patients with healthy knees. In an accepted study, we found that inflammatory markers were increased in all patients with ACL injuries, but there were no differences between those with and those without cartilage damage [5]. This suggests that the ACL tear leads to a change in the inflammatory milieu which may be the proximate cause of post-traumatic osteoarthritis, as opposed to cartilage damage suffered at the time of injury.

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Received Date: 09 Jan 2017

Accepted Date: 24 Mar 2017

Published Date: 31 Mar 2017

Citation:

Kaplan DJ. Contemporary Research Areas in Sports Medicine. *Clin Surg*. 2017; 2: 1393.

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