

without evidence of increased re-rupture rate or any signs of infection. Modified harvest and closure techniques reduce anterior knee pain after autograft BPTB.

Two Year Follow-up Comparing 2-Incision vs Anteromedial Portal Techniques for Femoral Drilling During Primary ACL Reconstruction SS-15

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Introduction: Anteromedial (AM) and 2-incision are two commonly used techniques for drilling the femoral tunnel during ACL reconstruction. The purpose of this study was to compare clinical and radiographic outcomes of patients undergoing primary ACL reconstruction using either AM or 2-incision technique with minimum 2-year follow-up.

Methods: 138 prospectively enrolled patients undergoing primary ACL reconstruction were divided into two groups based on femoral drilling technique and were evaluated pre-operatively, 6 weeks and 2 years post-operatively. Outcomes scores were collected at each visit using SF-36 PCS and MCS components, KOOS, and the Knee Activity Rating Scale.

Results: 48 patients underwent AM technique and 90 patients underwent 2-incision. Univariate analysis revealed no difference in pre-operative outcomes with the exception of AM group having higher KOOS Knee Pain ($p=0.023$) and Womac Pain ($p=0.036$). Following surgery, 2-incision femoral tunnels had a higher radiographic coronal angle ($68.8^\circ \pm 8.6^\circ$ vs $51.4^\circ \pm 11.3^\circ$; $p<0.001$) and clinical extension ($1.2^\circ \pm 2.7$ vs $2.9^\circ \pm 4.0^\circ$; $p=0.010$). There were no differences in knee flexion, complications, or re-rupture. There were also no differences clinical outcome scores with the exception of AM group having a higher 6-week and 2-year post-op KOOS ADL ($p=0.030$ and 0.050 , respectively) and KOOS Womac ($p=0.030$ and 0.050 , respectively), although likely not clinically relevant given the pre-operative differences. Multivariate analysis showed no clinical or outcome differences between AM and 2-incision techniques.

Conclusion: ACL reconstruction using the AM technique yielded lower radiographic coronal tunnel angle and slightly decreased knee extension. The theoretical risk of graft failure secondary to higher coronal angle leading to a "sawing" of the graft as it passes around a sharper femoral corner was not observed. Additionally, differences in pre-operative KOOS likely made post-operative differences irrelevant. We conclude there are no clinically relevant differences at 2 years in patients undergoing primary ACL reconstruction using either the AM or 2-incision femoral drilling techniques.

Fibrin Clot Prevents Bone Tunnel Widening after ACL Reconstruction with Allograft SS-16

April 14, 1:45 PM

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Introduction: Bone tunnel widening is a potential complication after ACL reconstruction. The aim of this study was to evaluate if adding a fibrin clot to the allograft for anatomic single-bundle ACL reconstruction would reduce tunnel widening.

Methods: Fifty patients who underwent anatomic single-bundle ACL reconstruction were included. Twenty-five patients received an allograft alone and 25 patients received an allograft with fibrin clot. All patients underwent standard plain anterior-posterior and lateral radiographs of the operated knee immediately after surgery and at 1 year follow-up. The size of the tunnels was measured at both time points to calculate tunnel widening. A t-test was used to compare tunnel widening between the allograft and the allograft + fibrin clot group.

Results: There was significantly less tunnel widening in the allograft + fibrin clot group for the femoral tunnel width in the middle and distal portion of the tunnel and for the tibial tunnel width in the proximal and distal portions, as compared to the allograft only group.

Conclusion: Adding a fibrin clot to the allograft in anatomic single-bundle ACL reconstruction reduces the amount of tunnel widening at one year follow-up.

Increased Lateral Tibial Plateau Slope Predisposes Male College Football Players to ACL Injury SS-17

April 14, 1:50 PM

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Introduction: There are conflicting reports regarding the role of bony morphology characteristics such as an increased tibial slope as a risk factor of anterior cruciate ligament (ACL) injury. The purpose of this study was to determine if there is a correlation between bony morphology characteristics and ACL injury risk in male college football players.

Methods: Ninety male college football players who underwent magnetic resonance imaging (MRI) for a knee injury between 2005 and 2014 were included. Subjects with an ACL injury (ACL injury group) were matched for age, height, weight and BMI to subjects without ACL