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언어구분	KOR	논문구분	원저/구연	논문분야	슬관절
논문제목	슬관절 이중다발 전방 십자인대 재건술 시에 전내측 및 후외측 다발의 굵기에 따른 역학적 변화				
영문제목	<b>How the kinematic behavior of double bundle reconstructed ACL changes according to change of diameter of each bundle?</b>				
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**서론 :** The antero-medial (AM) bundle sees greater loads at all flexion angles, whereas the postero-lateral (PL) bundle will see appreciable strain only at low flexion angles in the double bundle ACL reconstruction. It is unclear how the biomechanical behavior of a double bundle ACL reconstruction would be affected by varying graft bundle size. There is no data available which addresses the question of sizing each respective bundle for double bundle reconstruction and the influence of varying graft diameters on the kinematics of the knee joint.

**재료 및 방법 :** The antero-medial (AM) bundle sees greater loads at all flexion angles, whereas the postero-lateral (PL) bundle will see appreciable strain only at low flexion angles in the double bundle ACL reconstruction. It is unclear how the biomechanical behavior of a double bundle ACL reconstruction would be affected by varying graft bundle size. There is no data available which addresses the question of sizing each respective bundle for double bundle reconstruction and the influence of varying graft diameters on the kinematics of the knee joint.

**결과 :** The variation of AM bundle diameter showed little difference of the translation in all flexion angles while translation values of the reconstruction models were less than that of the intact model in all flexion angles. However, the ligament forces of AM and PL bundles were dependent on the variation of graft diameter. The variation of AM bundle diameter influenced little on the rotational stiffness in all flexion angles in both valgus and axial rotation.

**결론 :** Varying the AM graft diameter does not seem to significantly influence the knee kinematics of double bundle ACL reconstruction, although larger sized AM grafts did experience more strain. Clinical Relevance. There is reciprocal graft strain whereas larger AM bundles appear to absorb more strain at the expense of diminished strain of the accompanying PL bundle. Therefore, in the clinical setting, increasing the size of the AM bundle relative to the PL bundle does not appear to be justified.

**acknowledgment :**

Knee, ACL Double bundle, Reconstruction

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