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논문제목 한국 정상 성인의 보행 재현성 분석

영문제목 **Repeatability of Foot 3D Multi-Segment Foot Model during gait in normal adults**

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서론 : Several 3D multi-segment foot models(3D MFMs) have been introduced for the in vivo analysis of dynamic foot kinematics. However, there are scanty evidences available to support their clinical use. Considering the potential of multi-segment foot model to assess function in foot pathology, there is a need for reproducible and reliable multi-segment foot models. The purpose of this study was to assess the intra-tester reliability of 3D multi-segment foot models.

재료 및 방법 : Several 3D multi-segment foot models(3D MFMs) have been introduced for the in vivo analysis of dynamic foot kinematics. However, there are scanty evidences available to support their clinical use. Considering the potential of multi-segment foot model to assess function in foot pathology, there is a need for reproducible and reliable multi-segment foot models. The purpose of this study was to assess the intra-tester reliability of 3D multi-segment foot models.

결과 : In general, the subject's stride-to-stride variation and test-to-retest variation was low. The highest variability was in the transverse plane at the forefoot and the most consistent finding was observed at sagittal plane of hallux and hindfoot. Although variances in marker placement might bring an additive offset in test-to-retest comparison, the curve patterns were consistent. Inter-segment foot angles from healthy adults of OrthoTrak 3D Multi-Segment Foot showed narrow range of variability when normalised to 100% of the gait cycle.

결론 : During the past 10 years, several 3DMFMs have been introduced. While these systems have inherent problems, such as skin motion artifact and reproducibility of marker location, 3DMFMs have potential benefits compared with single-segment foot model gait analysis. If the reliability issue can be overcome, clinical utility of 3DMFMs would enable the physicians to assess the functional disability and treatment outcome more objectively. In this study, we found OrthoTrak 3DMFM showed high stride-to-stride and test-to-retest repeatability in each subject, especially in sagittal plane motion. We think this particular type of 3DMFM would be a reliable system to assess the motion of foot segment during gait.

acknowledgment :

repeatability , multi-segment foot model, OrthoTrak 3D, gait analysis
