



Inter/ intra rater reliability of body landmark analyzer for measuring of the quadriceps angle

Poster Presentation

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Abstract

Introduction: The health of the human skeletal system is threatened by many factors, including the habits of life, occupation, culture, and even the environment. When skeletal abnormalities are raised, attention is paid more to spinal abnormalities, while other parts of the body can also be exposed to multiple abnormalities and complications. The most important skeletal deformities of the knee joint are Genovarum and Genovalgum. The quadriceps angle is used to measure these anomalies. There are many methods as invasive and non-invasive for calculating of Q angle. The purpose of the present research was to study the inter/intra rater reliability of the Body Landmark Analyzer (BLA) method for measuring of the Q angle.

Methods: Seventeen healthy males participated in this study (age= 23.4±1.7 years, height= 176.32±6.41 cm, and weight: 72.25±14.6 kg). Anatomical Landmarks of the ASIS, medial and lateral epicondyle, tibial tuberosity, and medial and lateral malleolus were used to diagnose and calculate the Q-angle position. Intra-class correlation coefficient (ICC) two-way mixed model on absolute agreement was used to identify the inter/intra raters' reliability and 95% confidence intervals.

Results: Considering the results of this research indicated high intra-class correlation coefficients the Q angle for the first and second technicians was 0.82, for the first and third technicians 0.8 and for the second and third technicians 0.79. Also, the inter-class correlation coefficient of this angle for the first, second and third technicians, respectively; 0.83, 0.81 and 0.80 were calculated.

Conclusion: Therefore, it can emphasize that BLA method has succeeded to make a high reliability for Q angle. Based on the mentioned capabilities and reliability of this method, it can suggest along with other non-invasive methods for diagnosing of skeletal abnormalities.

Keywords

Reliability; Q angle; Genovarum; Genovalgum; BLA system

Reference:

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