

踝關節本體感覺測試之信度研究

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摘 要

研究驗證本體感覺功能對動作控制學習與運動傷害預防有密切的關係，然而早期研究大多是採用自行設計之儀器，測試之方法與結果無法進一步的比較與分析。有鑑於相關研究設備的不一致，本研究採用精密商用儀器，以探究建立一種有效可信的踝關節本體感覺測試之方法與流程，並進一步探討個體雙腳本體感覺的關係與差異。受試對象為 8 位雙腳下肢功能正常之健康人，以 Biodex III 等速肌力測量儀器內建之本體感覺測試流程(protocol)，量測受試者主動與被動的本體感覺功能，測試速度在主動與被動測試模式中分別設定為 500°/sec 與 2°/sec，而測試關節角度則選定為 15°內翻、0°中立位置、10°外翻(Szczerba et al., 1995)。統計資料以平均數±標準差表示，以級內相關係數(Intraclass Correlation Coefficients, ICC)來考驗信度，以獨立樣本 t 考驗檢定雙腳本體感覺測試的差異。結果：一、以 BIODEX III 等速測力器量測雙腳踝關節主動與被動復位能力之級內相關係數高達 0.85~0.92；二、踝關節被動復位誤差角度皆較主動復位誤差角度小。結論：應用 BIODEX III 踝內翻外轉本體感覺測試方法，所獲得的實驗數據是相當可信的，然而個體兩腳間主動與被動復位能力的差異，是導因於個體過去踝傷害經歷，或是慣用與非慣用腳之生理功能所致，仍需後續更多相關研究加以確認，然而不佳的本體感覺與差異過大的主動與被動復位能力，應會增加關節傷害的機率與風險，後續研究可以此法進一步探討其切確機轉。

關鍵詞：踝關節本體感覺、測試信度

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The Reliability and Difference of Ankle Proprioception on Biodex III

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Abstract

Recently studies verified that proprioception have close relationships with movement control learning and sport injury prevention. But most of the previous studies utilized self-designed equipment, it is hardly to compare and analyzes these related results. Consideration for the limitation and discrepancy of early studies, this study utilized the Biodex III accurate commercial dynamometer to establish a reliable ankle proprioception testing procedure and verify the difference of proprioception between ankles. The ankles of 8 healthy college-aged male subjects were tested in this study. The Bioedx III isokinetic dynamometer was used to assess ankle proprioception function: active and passive position sense. The testing speed were set at 500°/sec and 2°/sec respectively. The testing angle were choose as 15° inversion, 0° neural, and 15° eversion (Szczerba et al., 1995). Intraclass Correlation Coefficients (ICC) and independent t-test were used to exam the reliability and difference between two legs. 1. The ICC indicated that this protocol utilized BIODEX III dynamometer to assess ankle proprioception had good reliability (0.85~0.92). 2. Ankle passive reposition error seem to be smaller than active reposition error. With the results and limitations of this study, it is reliable to use this ankle proprioception assessment protocol. But this study found difference in active and passive proprioception between two legs. These discrepancies caused from previous ankle injuries or due to the physiological difference of dominant and non-dominant needed further study to examine.

Key words : ankle proprioception, reliability

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