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**題目 (Title):**

腦性麻痺兒童的兩種股直肌厚度量測技巧的比較

(A Comparison of 2 Techniques for Measuring Rectus Femoris Muscle Thickness in Cerebral Palsy)

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**目的 (Purpose):**

精準測量肌肉尺寸對研究腦性麻痺兒童的肌肉無力是有用的。因此本研究的目的為決定兩種股直肌厚度量測技巧用在腦性麻痺兒童的一致性

(Precise measures of muscle size are useful when investigating weakness in children with cerebral palsy (CP). Therefore, the purpose of the study was to determine agreement between 2 muscle thickness measurements of the rectus femoris (RF) in CP.)

**方法 (Methods):**

利用超音波影像測量 13 位可行走的腦性麻痺兒童(平均年齡:  $14.4 \pm 3.6$  歲), 其雙側股直肌厚度。在大腿肌肉長度的 50%處測量三次取平均值(即 MT50), 最大肌肉厚度(MaxMT)經由往股直肌近端起點重覆量測取得。

(Measures of RF thickness in 13 youth with CP who were ambulatory (mean age:  $14.4 \pm 3.6$  years) were obtained bilaterally using ultrasound imaging. Three measures were obtained at 50% thigh length and averaged (MT50). Maximum muscle thickness (MaxMT) was also determined through repeated measurements toward the proximal

insertion of the RF.)

**結果 (Results):**

布蘭德-奧特曼分布顯示所有的值，除了一偏離值外，皆落在一致性的 95%信賴區間內(-0.11 到 0.28 公分)，表現出良好的一致性。但也觀察到持續出現的偏誤，即最大肌肉厚度(MaxMT)的測量值偏高。

(The Bland-Altman plot showed that all values, except for one outlier, fell within 95% limits of agreement (-0.11 to 0.28 cm), showing excellent agreement. However, a constant bias toward higher values with MaxMT method was observed.)

**結論(Conclusions):**

由於最大肌肉厚度(MaxMT)的測量耗費時間，MT50 之肌肉厚度測量方法也許是預估股直肌最大厚度的另一較為可行的方法。

(Given the time-consuming nature of obtaining MaxMT, the MT50 measurement may be a more feasible alternative when estimating maximum muscle thickness of the RF.)