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## 題目 (Title):

特發性脊柱側彎青少年椎旁肌厚度的超音波影像檢查:比較與信度研究 (Ultrasonographic Measurements of Paraspinal Muscle Thickness in Adolescent Idiopathic Scoliosis: A Comparison and Reliability Study)

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### 目的 (Purpose):

使用超音波影像檢查輕度特發性脊柱側彎青少年椎旁肌不對稱並與控制組對照以及決定超音波影像檢查的信度。

(To examine paraspinal muscle asymmetries in patients with mild adolescent idiopathic scoliosis (AIS) compared with controls using ultrasound (US) imaging and to determine reliability of the US imaging.)

### 方法 (Methods):

20 位青少年(10 個有特發性脊柱側彎,10 個無)參與此研究,並使用超音波影像來測量胸椎第八節的深層椎旁肌和腰椎第一節及第四節的多裂肌的肌肉厚度。(Twenty adolescents (10 with and 10 without AIS) whose muscle thickness of the deep paraspinals at T8 and the multifidus at L1 and L4 vertebral levels was determined using US imaging.)

#### 結果 (Results):

超音波影像有良好的施測者內信度(ICC3,3 = 0.83-0.99)和施測者間信度(ICC2,3 = 0.93-0.99)。研究發現在胸椎第八節和腰椎第一節其凹側肌肉厚度統計學上顯著大於凸側。輕度特發性脊柱側彎青少年與控制組相比,其在胸椎第八節,腰椎第一節和第四節凹側的標準化肌肉厚度值也顯著較厚。

(Ultrasound imaging had good intrarater reliability (ICC3,3 = 0.83-0.99) and interrater reliability (ICC2,3 = 0.93-0.99). Significantly greater muscle thicknesses were found on the concave side at T8 and L1 compared with the corresponding convex side. Significantly greater normalized muscle thickness values were found on the concave side at T8, L1, and L4 in patients with mild AIS compared with controls.)

## 結論 (Conclusions):

於青少年,不論有無特發性脊柱側彎,能使用超音波影像可靠的測量胸椎深層椎旁肌和腰椎多裂肌。輕度特發性脊柱側彎青少年的兩側椎旁肌有統計學上顯著的不對稱。

(Ultrasound imaging is reliable for measuring the deep thoracic paraspinals and lumbar multifidus in adolescents with and without idiopathic scoliosis. Significant paraspinal muscle asymmetries were found in mild AIS.)

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