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題目 (Title):

自閉症類群障礙兒童於著地時之表面肌電圖分析：前驅研究

sEMG Analysis During Landing in Children With Autism Spectrum Disorder: A Pilot Study.

摘要中文翻譯**目的：**

為探討自閉症類群障礙（autism spectrum disorder，ASD）兒童在一項著地任務中肌肉活化的時機與持續時間，並將其反應與典型發展的兒童做比較。

方法：

6名兒童(年齡 3-4.5歲)，一半患有自閉症類群障礙，懸掛於一垂直的欄杆後著地，並依照一燈光線索反應；燈光線索指示兒童向右或向左跑，或停留於原地。記錄並比較兩組兒童的肌電圖與運動學表現。

結果：

在著地衝擊前，患有自閉症類群障礙的兒童有較多與較長時間的肌肉活化，典型發展的孩子則是在著地衝擊時有較多與較長時間的肌肉活化。

結論：

此結果顯示：患有自閉症類群障礙的兒童相較於典型發展的同儕，其著地策略發展較不足。進一步研究患有自閉症類群障礙兒童的神經肌肉組成將可引導未來對此族群的介入。

Original Abstract

PURPOSE:

The aim was to explore the timing and duration of muscle activation during a landing task in children with autism spectrum disorder (ASD), and compare their responses to those of children who are developing typically (TD).

METHODS:

Six children (ages 3-4.5 years), half with ASD, hung from a vertical bar, landed, and reacted to a light cue that signaled the child to run to the right or left or to stay in place. Electromyography and kinematics were recorded and compared between groups.

RESULTS:

Children with ASD had more and longer bursts of muscle activation during preimpact. In contrast, children TD displayed more and longer burst of muscle activation during impact.

CONCLUSION:

The results suggest that children with ASD have a less developed landing strategy compared with their peers TD. Further investigation into the neuromuscular components in children with ASD will guide future interventions for this population.

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