E-Poster

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Relationship Between Residual Gait Deviations And Physical Activity Levels Among Children Treated Surgically for DDH: Case-Control Study

Topic: Health Conditions (Nervous System, Musculoskeletal System, Cardiopulmonary System)

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BACKGROUND

Relationship between residual gait deviations and physical activity (PA) levels among children treated surgically for developmental dysplasia of the hi (DDH): A case-control study. Physical activity is widely recognized for its benefits in both healthy children and those with hip conditions, such as developmental dysplasia of the hip (DDH). In children with DDH, PA is considered by pediatric surgeons to be a key factor in the recovery process following surgery. While studies analyzing gait in children who have undergone surgical treatment for DDH report generally good functional and radiological outcomes, some children continue to exhibit residual gait abnormalities. However, no study has specifically assessed PA levels in children with DDH or investigated the relationship between residual gait deviations and PA levels in this pediatric population. This study aims to compare: Physical activity levels, spatiotemporal, kinematic, and kinetic gait parameters, between children surgically treated for DDH and healthy controls. Additionally, the primary objective is to explore the potential correlation between postoperative gait abnormalities and PA levels in this population.

METHODS

A total of 20 children with DDH (aged 8 to 14 years) and 20 age- and sex-matched healthy controls will undergo quantitative gait analysis at the gait analysis laboratory of Mohamed VI Teaching Hospital to assess gait parameters. Anthropometric measurements, including weight, height, Body mass index (BMI), lower limb length, will be collected before the gait analysis. Additional clinical information will be obtained through interviews with the parents and a review of medical records to document the child's age at walking acquisition, age at surgery, and surgical procedure performed. A physical examination will be conducted to assess hip range of motion (ROM) and hip muscle strength in both groups. PA levels will be measured using the Arabic version of the "Physical Activity Questionnaire for Children (PAQ-C)". Statistical analysis will be performed using SPSS 27.

RESULTS

The existence of a negative correlation between gait abnormalities and physical activity levels in children who have undergone surgery for DDH. In other words, children with postoperative gait deviations have a lower level of physical activity compared to their healthy peers."

CONCLUSION

This study will provide valuable insights into the impact of residual gait abnormalities on PA levels in children treated surgically for DDH. Understanding this relationship could guide rehabilitation strategies to enhance functional recovery and encourage higher PA levels, ultimately improving the overall health and well-being of this population.

Statement of Disclosures

Not applicable

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