Physical Therapy Department for Growth and Development Disorder in children and Its Surgery

Doctoral Degree

2021

Author	**:**	**Mai Mohamed Husein Khalaf.**
Title	**:**	**Postural assessment in children with *β*-thalassemia.**
Dept.	**:**	**Physical Therapy Department for Growth and Developmental Disorder in Children and its Surgery.**
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Degree	**:**	**Doctoral.**
Year	**:**	**2021.**
Abstract	**:**	

Objective: Bone abnormalities in the β-thalassemia are very common. These bone abnormalities are important complications that significantly affect postural development process. This cross-sectional study was designed to evaluate the postural alignment in children diagnosed with β-thalassemia. Methods: Forty male children with β-thalassemia aged from 6 to 10 years, were compared to fifty healthy normal children with respect to age and gender. The postural evaluation process was done according to the Postural Assessment Software (PAS/SAPO) from four different views; anterior, posterior, and both lateral views. Results: From the anterior view, there were statistically significant differences in the mean values of Horizontal alignment of head (HAH-anterior), Horizontal Alignment of Acromion (HAA), Horizontal Alignment of Anterior Superior Iliac Spine (HAASIS), Angle between the two acromions and the two anterior superior iliac spines (AAASIS), Frontal angle of right and lower limb (FARLL and FALLL), Length difference between right and left limbs (LDRLL), Horizontal angle of tibial tuberosity (HATT), right and left Q angles between both groups. Regarding the lateral views, there were statistically significant differences in the mean values of Vertical Alignment of the Head (VAH), Vertical Alignment of the Body (VAB) and left lateral Vertical Alignment of the Trunk (VAT) between both groups. From the posterior view, there were statistically significant differences in the mean values of the Horizontal asymmetry of scapula in relation to T3 (HAST3) and Leg/left hindfoot angle (LRA). Conclusion: The study concluded that β-thalassemia a chronic disease has a negative impact on the postural alignment of these children.

Key words	**1.**	**β-thalassemia**
	2.	**postural assessment**
	3.	**children with *β*-thalassemia.**
	4.	**PAS**
	5.	**SAPO**
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ELECTRONIC GUIDE TO THESES APPROVED BY PHYSICAL THERAPY DEPARTMENT FOR GROWTH AND DEVELOPMENT DISORDER IN CHILDREN AND ITS SURGERY

Author	**:**	**Noha Abd El-Kader Abd El-Kader.**
Title	**:**	**Handgrip Strength In Relation To Bone Mineral Density And Hand Functions In Preschool Children.**
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Degree	**:**	**Doctoral.**
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Abstract	**:**	

Background: Hand grip strength is one of the best indicators of the overall strength of the upper limb and it is evaluated as a component of hand function. Assessment of bone health in children is important to identify future risk. Purpose: To investigate correlation between hand grip strength with both bone mineral density and hand functions in preschool children. Subjects: Sixty normal preschool children (32 boys and 28 girls), aged from 4 to 6 years old were participated in this study. Methods: Each child was evaluated individually by using Peabody Developmental Motor Scale (PDMS-2) to determine standard scores of visual-motor integration subtest and age equivalent for fine motor activities and Baseline pneumatic squeeze handheld dynamometer to detect maximum hand grip strength, Bone mineral density was assessed by DEXA at National Research Center for all children Results: There was statistically significant correlation between hand grip strength with bone mineral density (r=0.367, p=0.004) and between hand grip strength and hand functions (r=0.756, p=0.0001) in preschool children. Conclusion: The findings of this study indicated that there was a positive correlation between hand grip strength with both bone mineral density and hand functions in preschool children. Thus, hand grip strength could be used as a predictor for bone density and hand skill in preschool children.

Key words	**1.**	**Hand Grip strength, Bone Mineral Density**
	2.	**Hand functions, preschool children.**
	3.	
	4.	
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