PP 06_ Case report

INVESTIGATION OF POSTURAL CONTROL IN CHILDREN WITH ACUTE LYMPHOBLASTIC LEUKEMIA

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Objective: Children with leukemia may face balance impairments due to somatosensory, motor, muscular, and cognitive deficits that can persist into adulthood and increase fall risk. This study aimed to evaluate postural control in children with Acute Lymphoblastic Leukemia (ALL) undergoing consolidation therapy by comparing their performance with normative data to identify potential treatment-related impairments in sensory integration and balance. **Methodology:** Thirteen children with ALL were recruited at Dokuz Eylül University, Faculty of Physiotherapy and Rehabilitation in Turkey, and divided into two age groups: 6–7 years (n = 9) and 8–9 years (n = 4). Static balance was evaluated using the modified Clinical Test for Sensory Interaction on Balance (mCTSIB) with the Balance Master system. The test assessed postural control under four conditions: Eyes Open-firm surface (FirmEO), Eyes Closed-firm surface (FirmEC), eyes open-unstable (foam) surface (FoamEO), and eyes closed-unstable (foam) surface (FoamEC). The center of gravity's average sway speed (°/s) was measured for each condition, with higher values indicating reduced balance capability. Normative data for each condition were obtained from previous studies on healthy children. **Results:** In the 6–7 years group, sway speeds during FirmEO and FirmEC were 0.92 s and 0.97 s, respectively, compared to norms of 0.70s and 0.92s. Under foam conditions, FoamEO reached 1.31s (norm: 1.20s), while FoamEC was 1.81s, nearly identical to the normative 1.80s. In the 8–9 years group, FirmEO was 0.55s (norm: 0.40s) and FirmEC was 0.65s (norm: 0.53s). FoamEO measured 0.82s (norm: 0.89s), whereas FoamEC was 1.70s (norm: 1.47s). Overall, these results suggest that children with ALL generally exhibit elevated sway speeds – particularly under firm conditions – implying impaired postural control and potential challenges in sensory integration. **Conclusion:** Our findings demonstrate that postural control is compromised in children with ALL undergoing consolidation therapy. Elevated sway speeds on firm surfaces suggest diminished balance performance, while the mixed results on foam conditions highlight difficulties with sensory integration. These preliminary observations underscore the need for targeted interventions and further research with larger samples to clarify the mechanisms behind these deficits.

https://doi.org/10.1016/j.htct.2025.103884

Adult Hematology Abstract Categories

Acute Myeloid Leukemia

PP 07_Case report

PROGNOSTIC VALUE OF CD56 EXPRESSION IN CHILDREN WITH ACUTE MYELOID LEUKEMIA

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Introduction: Expression of lymphoid markers (CD2, CD3, CD5, CD7) in Acute Myeloid Leukemia (AML) is an important prognostic factor that affects the clinical outcome of these patients. CD56 antigen is a NK cell marker that is expressed in several lymphohematopoietic neoplasms, including AML. The presence of CD56 antigen on blast cells can affect the duration of Complete Remission (CR), and is also associated with short overall survival and resistance to therapy. We studied a cohort of children diagnosed with AML treated from 2022–2024 and assessed the association of CD56 expression with therapy outcomes. **Methodology:** To determine the frequency of CD56 by flow cytometry in children with AML and to study the prognostic significance of this marker. Materials and Methods: The study included 31 patients aged 0–16 years diagnosed from January 2022 to December 2024. The study was conducted on a BD FACS CANTO flow cytometer using an 8-color panel of monoclonal antibodies. Marker expression on blast cells of more than 20% was considered positive. **Results:** CpeThe total observation period was 31 months. The patients were divided into 3 age groups: 0–5-years – 5 (16%), 5–10-years – 12 (38.7%), 10–16 years – 14 (45%) patients, male – 17 (54.8%), female – 14 (45%). In the general observation group, 19 (62%) patients were in complete clinical and hematological remission, 10 (34%) patients had bone marrow relapse, 4% had resistance to therapy. In 7 (23%) cases, positive expression of CD56 was observed, of which 3 (9.6%) cases of AML with signs of maturation, 1 (3%) case of promyelocytic, 3 (9.6%) cases of myelomonoblastic leukemia. Among CD56 positive AML patients, mutations such as t(8;21)(q22;q22), ct(15;17), t(11q23), inv(16) were detected. Survival analysis was performed using the Kaplan-Meier method. The achievement of complete remission in response to induction chemotherapy between CD56-positive and CD56-negative groups was almost identical (85% and 81%). Relapse-free survival between CD56 positive and negative variants was significantly different (67% vs. 48%). Among children with AML with CD56-positive, higher relapse and mortality rates were observed than in the CD56-negative group ($p < 0.05$). **Conclusion:** We consider CD56 expression as an independent prognostic factor. It is recommended to keep in mind that the presence of this