Introduction

• Children with Acute Lymphoblastic Leukemia (ALL) have problems in body functions, activities, and participation during treatments (1).
• We aimed to determine association between muscle strength and activity and participation in children with ALL.

Methods

• This study was conducted at Hacettepe University, Ankara/Turkey.
• Children with ALL (n=18, Girl:10/Boy:8) between the age of 5 and 10 years, receiving consolidation chemotherapy at outpatient clinic were included.
• Muscle strength was assessed with grip strength for upper extremity and 30 second sit to stand test (SST) for lower extremity.
• Pediatric Outcomes Data Collection Instrument (PODCI) was used to assess activities and participation level of the children.

Results

• Assessed parameters of the children was showed in Table 1.
• The SST was moderately correlated with subtest of PODCI-transfer and basic mobility (r=0.545, p=0.019).
• Dominant hand grip strength was moderately associated with PODCI global functioning score (r=0.624, p=0.013).

Table 1. Assessed Parameters of the Children

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Mean ± SD</th>
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<tbody>
<tr>
<td>Age, years</td>
<td>6.88 ± 1.37</td>
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<tr>
<td>Mean duration after diagnosis, months</td>
<td>22.5 ± 7.85</td>
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<tr>
<td>Grip Strength, N</td>
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<tr>
<td>Dominant side</td>
<td>6.64 ± 3.86</td>
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<tr>
<td>Non-dominant side</td>
<td>6.11 ± 4.29</td>
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<tr>
<td>30 second sit to stand test, times</td>
<td>15.77 ± 3.28</td>
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</tbody>
</table>

Conclusion

• Activity and participation level may give more information regarding “returning to normal life” for children with ALL (2).
• Muscle strength was found one of the predictors affecting activities and participation in this study.
• Interventions aiming to increase muscle strength will positively affect activities and participation level in children with ALL.

References


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