INTRODUCTION

- Vitamin D has important roles in bone health, immune function, metabolic regulation, and cancer.
- Children with cancer may be especially vulnerable to fluctuating Vitamin D levels due to their disease itself, chemotherapy, and limited nutrition and sun exposure.
- Literature addresses only childhood cancer survivors after therapy concluded.

METHODS

- Prospective case control study
  - Case: children (<21 yr) on chemotherapy for more than 6 months
    - 53 age-and-ethnicity-matched
  - Fever in patients with cancer during the study period was recorded
  - Fever severity score was calculated for each febrile episode.
- This study investigated
  (i) Incidence of vitamin D in cancer affected children vs controls
  (ii) Change in vitamin D levels through the course of cancer treatment
  (iii) Correlation between vitamin D levels and
    (i) number of fever episodes
    (ii) fever severity score
  (iv) Vitamin D (25OHD) was assessed at
    (i) baseline (T1, both cancer and control groups)
    (ii) 3-4 months later (T2 cancer)
    (iii) 6-8 months later (T3).

RESULTS

- Table 1, Chart 1 and Chart 2
- A few cases missed some planned draws due to COVID-19.
- Among cases, Vit D did not correlate with the number of fever episodes or fever severity scores (all p>0.05).

Table 1: Demographics

<table>
<thead>
<tr>
<th></th>
<th>N</th>
<th>Age (yr)</th>
<th>BMI (kg/m²)</th>
<th>Gender (male)</th>
<th>Ethnicity (Hispanic)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cancer</td>
<td>47</td>
<td>8.2 ± 5.4</td>
<td>19.2 ± 4.7</td>
<td>66.0%</td>
<td>48.9%</td>
</tr>
<tr>
<td>Control</td>
<td>53</td>
<td>8.9 ± 5.0</td>
<td>19.0 ± 5.3</td>
<td>62.7%</td>
<td>56.9%</td>
</tr>
</tbody>
</table>

* The cancer and control groups were comparable in terms of age, gender, ethnicity, BMI, and 25OHD at baseline (all p>0.05).

CONCLUSION

- Our findings suggest that children with cancer are not at higher risk of Vit D deficiency.
- Vit D level dose not affect incidence of fever or fever scores.
- Larger studies are needed.

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The Clinical Research Institute (CRI); and the Center of Excellence for Integrative Health (CEIH) have contributed tremendously to this project.