Background

Vitamin D deficiency is common in pediatric Crohn’s disease patients. This can lead to immune system dysfunction and problems with bone growth. Registered dietitians are an essential part of the healthcare team and should have standard guidelines available to assist with the assessment and treatment of these patients.

Methods

Multiple databases (PubMed, CINAHL, Embase, Scopus, Taylor and Francis, UpToDate) were searched using keywords: pediatric, nutrition, dietitian, deficiency, Crohn’s disease, inflammatory bowel disease, IBD, vitamin D, cholecalciferol, recommendation, and guidelines. Inclusion criteria: Published 2014 or later, published in English, and contained pediatric data. Case studies were excluded.

Aim of the Study

The aim of this study is to develop guidelines for registered dietitians in the assessment and treatment of low vitamin D in pediatric Crohn’s disease patients based on current available evidence-based medicine. By providing registered dietitians with set guidelines, medical nutrition therapy will be performed uniformly by all practitioners, leading to continuity of care and improved outcomes for patients.

Goals of nutritional treatment of low vitamin D:

Increase dietary vitamin D, when possible

- Provide nutrition education on the dietary sources of vitamin D

Supplement vitamin D when necessary

- Provide recommendation to the physician for ordering supplemental vitamin D using Crohn’s and Colitis Foundation guidelines

Monitor serum vitamin D levels regularly

- Request vitamin D3 levels to be checked every 6-12 months

Tools for use by RDs in the assessment and treatment of low vitamin D in Crohn’s disease

<table>
<thead>
<tr>
<th>Nutrition-focused physical exam</th>
<th>Normal lab value parameters</th>
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<tbody>
<tr>
<td>24-hr dietary recall</td>
<td>Food frequency questionnaire</td>
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<tr>
<td>Vitamin D food sources handout</td>
<td>Nutrition Care Manual</td>
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Example PES Statements:

Low serum vitamin D3 levels related to poor dietary intake of high vitamin D food sources and limited UV light exposure per pt dietary recall and he is evidenced by 25(OH)D3 level of ___.

Low serum vitamin D3 levels related to possible gastrointestinal losses with excessive diarrhea as evidenced by pt report of 5 stools/day and 25(OH)D3 level of ___.

Summary Chart of Recommendations

<table>
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<tr>
<th>Recommendation</th>
<th>Sources</th>
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| Patients with Crohn’s disease should consult with a registered dietitian to avoid and/or treat malnutrition and low vitamin D | • ESPEN  
• Asian Working Group  
• UpToDate |
| Vitamin D serum levels should be monitored regularly in Crohn’s disease patients using steroids | • ESPEN  
• Expert Reviews |
| Low vitamin D should be repleted and monitored in patients with Crohn’s disease | • ESPEN  
• UpToDate  
• Expert Reviews |

Results

Overall agreement that registered dietitians are a necessary member of the healthcare team in this population was found. Aims: vitamin D is a micromoment of concern, particularly in patients on steroid therapy and should be monitored and repleted when low.

Conclusions

Specific supplementation guidelines for low vitamin D in Crohn’s disease were not consistent, but it was widely noted as a necessary micromoment to be monitored. The importance of nutritional care from a registered dietitian was evident in all studies.

References