Ongoing symptoms and reduced health measures in unicentric Castleman disease patients despite perceived-to-be curative surgical excision

Freda R. Coren¹, Mateo Sarmiento Bustamante¹, Sheila K. Pierson¹, David C. Fajgenbaum¹
¹Department of Medicine, Center for Cytokine Storm Treatment & Laboratory, University of Pennsylvania, Philadelphia, PA, 19104, USA

Introduction

• Unicentric Castleman disease (UCD) is one of several subtypes of CD that share characteristic histopathology.
• UCD is characterized by a single region of enlarged lymph nodes (LN) and milder symptoms than other forms of CD.
• UCD symptoms can occur due to compression of neighboring structures or inflammatory cytokine production.
• The complete surgical excision of the enlarged LN is curative in 84-96% of patients.¹
• Many UCD patients, however, describe persistence or worsening of symptoms post-LN excision despite the absence of measurable disease.
• We sought to better characterize and describe the experience of UCD patients using surveys that captured information about general quality of life (QOL) and specific health measures.

Methods

• All patients enrolled in the ACCELERATE Natural History registry (NCT02817997) who either self-reported or were suspected of having a UCD diagnosis were invited to participate in a series of validated surveys including:
  - Rand36-item Short Form Survey
  - EQ-5D-5L
  - Multicentric CD Symptom Score Survey
• Participants also completed an additional survey regarding ongoing symptoms.
• Among the 107 UCD patients invited to participate, 51 (48%) completed all 4 surveys.
• A subset of 25 of these patients who had been reviewed by a panel of physicians confirming a UCD diagnosis was also analyzed (Confirmed Subcohort, CS).

Results

### Table 1. Symptoms described post-LN excision

<table>
<thead>
<tr>
<th>Symptom</th>
<th>Number (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>No Symptoms, N (%)</td>
<td>2 (3.9)</td>
</tr>
<tr>
<td>Shortness of Breath, N (%)</td>
<td>13 (25.5)</td>
</tr>
<tr>
<td>Loss of Appetite, N (%)</td>
<td>9 (17.7)</td>
</tr>
<tr>
<td>Tiredness/fatigue/lack of energy/feeling weak, N (%)</td>
<td>31 (60.8)</td>
</tr>
<tr>
<td>Skin lesions or rash, N (%)</td>
<td>15(29.4)</td>
</tr>
<tr>
<td>Itching, N (%)</td>
<td>13 (25.5)</td>
</tr>
<tr>
<td>Numbness or tingling, N (%)</td>
<td>18 (35.3)</td>
</tr>
<tr>
<td>Pain, N (%)</td>
<td>20 (39.2)</td>
</tr>
<tr>
<td>Fever, N (%)</td>
<td>4 (7.8)</td>
</tr>
<tr>
<td>Swollen/enlarged lymph nodes, N (%)</td>
<td>17 (33.3)</td>
</tr>
<tr>
<td>Swelling or edema in other body areas, N (%)</td>
<td>12 (23.5)</td>
</tr>
<tr>
<td>Night Sweats, N (%)</td>
<td>20 (39.2)</td>
</tr>
<tr>
<td>Excessive Daytime sweating, N (%)</td>
<td>11 (20.6)</td>
</tr>
<tr>
<td>Headaches, N (%)</td>
<td>17 (33.3)</td>
</tr>
</tbody>
</table>

### Figure 1. UCD health-related QOL measures post-LN excision (N=51)

Responses to the Rand36-item Short Form Survey are plotted for UCD patients post-LN excision and for a Medical Outcomes Study cohort consisting of individuals with diabetes, hypertension, coronary heart disease, and/or depression. Scores range from 0-100, with lower scores indicating poorer health measures.

### Table 2. Time since most recent LN excision for those experiencing ongoing symptoms on day of survey

| Time since LN excision | N |%
|------------------------|---|---
| Less than 1 week       | 0 | 0
| 1 week - 1 month       | 0 | 0
| 1 - 3 months           | 0 | 0
| 3-6 months             | 1 (3.7) | 0
| 6 months – 1 year      | 1 (3.7) | 0
| More than 1 year       | 25 (92.6) | 0

Summary & Discussion

• Overall, these data suggest that a perceived-to-be curative excision may not actually result in symptom-free outcomes in a substantial proportion of UCD patients.
• Patients reported lower QOL metrics than a sample representative of the general US population as well as health measures comparable to a cohort of individuals with chronic health conditions.
• Notably, the full, self-reported cohort consistently reported lower (more unhealthy) scores than the confirmed subcohort (not statistically tested).
• A different, undiagnosed disorder may thus be the root cause of symptoms for some patients in the self-reported UCD cohort.
• Patients may also be experiencing co-morbidities responsible for continued symptoms rather than UCD itself.
• These results may be confounded by reporting bias and may not be representative of the full UCD population.

Future Directions

• Future work is needed to correlate the survey responses with clinical, laboratory, and experimental data in order to further elucidate the mechanisms behind symptoms post-LN excision and to determine treatment options.
• A panel of clinicians and pathologists will review the clinical history of each survey respondent to confirm likelihood of UCD diagnosis.

References


Contact information: davidfa@pennmedicine.upenn.edu