Cutaneous and Extracutaneous Disease Burden, Demographics, and Treatment Modalities in Patients with Alopecic Sarcoidosis: A Systematic Review

Chinemem Obijiofor, BA1; Michelle Sikora, BS1, 2*; Ata S. Moshiri, MD, MPH1; Kristen Lo Sicco, MD1; Sotonye Imadogunje, MD, MBE1; Avrom S. Caplan, MD1

1The Ronald O. Perelman Department of Dermatology, NYU Grossman School of Medicine, New York, NY
2New York Medical College, Valhalla, NY
3Department of Dermatology, Brigham and Women’s Hospital, Boston, MA

*Authors contributed equally as co-firsts

Background

- Alopecic sarcoidosis is an uncommonly reported cutaneous manifestation of sarcoidosis with limited literature suggesting a higher prevalence among Black patients.1-6
- Both scarring (SA) and non-scarring alopecic (NSA) sarcoidosis have been reported.
- Limited data exists guiding evaluation and treatment of alopecic sarcoidosis.
- In this systematic review, we aimed to:
  • Identify clinicopathologic features of SA and NSA
  • Elucidate associations between alopecic sarcoidosis, race, and extracutaneous disease
  • Review treatments

Methods

- Following the Preferred Reporting Items for Systematic Reviews and Meta-Analyses guidelines (PRISMA), two authors independently searched PubMed, Scopus and Google Scholar from inception through August 2023.
- Search terms used in various combinations included: sarcoid, sarcoidosis, alopecia, hair, scalp, cicatricial, scarring and non-scarring
- Inclusion criteria encompassed publications with at least 1 case of sarcoidosis alopecia, excluding non-English publications.
- Treatment quality was assessed using the modified Oxford Centre’s Level of Evidence scale.7
- P-values were calculated with Pearson χ2 for categorical variables and Student’s T-test or Analysis of Variance for continuous variables as appropriate.

Results

- Of 1,778 search results, 60 case reports/series met inclusion criteria with most studies receiving low quality evidence ratings of ≥ 3.
- 47 SA and 18 NSA patients were identified (female: 70.8%). Black patients comprised the majority (71.1%) of all alopecic subgroups without significant differences in race (p=0.39) or burden of extracutaneous sarcoidosis (71.4%, p=0.32) found between groups.
- Patients with SA were significantly more likely to be female (p <0.001), Black (p <0.001), and have systemic sarcoidosis (p=0.03).
- Patients with SA received a greater number of therapies than those with NSA (2.6 vs 1.8, p=0.29); however, this was not statistically significant.
- Systemic and local corticosteroids were the most reported treatment.
- Additional therapies for SA included non-corticosteroid immunomodulators and immunosuppressants.

Conclusion

- SA and NSA have a high occurrence among skin of color patients and are associated with a significant burden of systemic involvement.
- Given the high burden of SA among Black women, these patients may require early initiation of immunosuppressive therapy to prevent scarring hair loss.
- Dermatologist should ensure all patients with alopecic sarcoidosis receive thorough evaluation for systemic disease.
- Limitations include low quality evidence and limited reports.

References


Table 1. Characteristics of cases of sarcoidosis alopecia and scalp sarcoidosis

<table>
<thead>
<tr>
<th>Characteristics</th>
<th>All cases (n=77)</th>
<th>Scarring alopecia (n=47)</th>
<th>Non-scarring alopecia (n=18)</th>
<th>Sculp sarcoidosis without alopecia (n=6)</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age (years), mean (SD)</td>
<td>48.9 (16.2)</td>
<td>52.8 (15.1)</td>
<td>40.1 (16.3)</td>
<td>54.7 (19.3)</td>
<td>0.02</td>
</tr>
<tr>
<td>Sex</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Female</td>
<td>51 (70.0%)</td>
<td>72 (88.5%)</td>
<td>2 (11.1%)</td>
<td></td>
<td>&lt;0.001</td>
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<tr>
<td>Male</td>
<td>26 (29.2%)</td>
<td>9 (12.8%)</td>
<td>9 (50.0%)</td>
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<td>0.010</td>
</tr>
<tr>
<td>Race</td>
<td></td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Black</td>
<td>32 (41.6%)</td>
<td>22 (77.8%)</td>
<td>3 (16.7%)</td>
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<tr>
<td>White</td>
<td>15 (20.3%)</td>
<td>5 (33.3%)</td>
<td>4 (25.0%)</td>
<td></td>
<td></td>
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<tr>
<td>Asian</td>
<td>4 (5.2%)</td>
<td>2 (66.7%)</td>
<td>1 (16.7%)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Scarring alopecia</td>
<td></td>
<td>5 (10.6%)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sculp sarcoidosis without alopecia</td>
<td>5 (83.3%)</td>
<td>5 (100%)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total number of treatments</td>
<td>2.6 (1.8)</td>
<td>2.6 (1.8)</td>
<td>1.4 (1.4)</td>
<td>1.4 (1.4)</td>
<td>0.097</td>
</tr>
</tbody>
</table>

Table 2. Summary of treatment, stratified by alopecia subtype

<table>
<thead>
<tr>
<th>Treatment given</th>
<th>All cases (n=77)</th>
<th>Scarring alopecia (n=47)</th>
<th>Non-scarring alopecia (n=18)</th>
<th>Sculp sarcoidosis without alopecia (n=6)</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>No treatment</td>
<td>48 (62.5%)</td>
<td>30 (63.8%)</td>
<td>12 (66.7%)</td>
<td>5 (83.3%)</td>
<td>0.08</td>
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<tr>
<td>Yes</td>
<td>29 (37.5%)</td>
<td>17 (36.2%)</td>
<td>6 (33.3%)</td>
<td>1 (16.7%)</td>
<td></td>
</tr>
<tr>
<td>Total number of treatments</td>
<td>2.6 (1.8)</td>
<td>2.6 (1.8)</td>
<td>1.4 (1.4)</td>
<td>1.4 (1.4)</td>
<td>0.29</td>
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References