Introduction

Allergic contact dermatitis (ACD) is a commonly presenting type IV hypersensitivity reaction that requires timely and accurate diagnosis for prompt treatment and prevention of offending agents. Rarely, ACD and other forms of dermatitis may be misidentified as a malignant disease process and vice versa.

Misidentification of dermatitis and malignancies can lead to delay in treatment, prolongation of symptoms, exposure to unnecessary diagnostic and therapeutic modalities, and negative psychological effects from being diagnosed with cancer. We conducted a review of literature to summarize documented cases and details related to their presentations including age, sex, location of lesions, histology, initial and final diagnoses.

Methods

- Online database search for English-language articles involving cases of ACD and other eczemas initially misidentified as malignancies and vice versa.
- Databases used were PubMed and OVID Medline 1946 to 2020.
- Searches were limited to appropriate search terms including mimicking, masquerading, eczema, contact, allergic, dermatitis, and malignancy.
- All study types and journals were considered for review.
- Titles and abstracts were then screened by one investigator for inclusion.
- Additional articles identified through related articles and citations were included for review.
- Titles and abstracts meeting relevant inclusion criteria were then selected for full review.
- Detailed information including patient sex, age, initial diagnosis, treatment, patch testing, histology and final diagnosis were extracted for further analysis.

Results

<table>
<thead>
<tr>
<th>Year</th>
<th>Age</th>
<th>Sex</th>
<th>Race</th>
<th>Site</th>
<th>Initial Diagnosis</th>
<th>Histology</th>
<th>Treatment</th>
<th>Followup</th>
</tr>
</thead>
<tbody>
<tr>
<td>2015</td>
<td>67</td>
<td>F</td>
<td>NR</td>
<td>Face</td>
<td>ACD</td>
<td>Epidermal hyperplasia</td>
<td>Topical and systemic steroids.</td>
<td>6 months</td>
</tr>
<tr>
<td>2016</td>
<td>54</td>
<td>F</td>
<td>NR</td>
<td>Face</td>
<td>ACD</td>
<td>Epidermal hyperplasia</td>
<td>Topical and systemic steroids.</td>
<td>6 months</td>
</tr>
<tr>
<td>2017</td>
<td>42</td>
<td>M</td>
<td>NR</td>
<td>Face</td>
<td>ACD</td>
<td>Epidermal hyperplasia</td>
<td>Topical and systemic steroids.</td>
<td>6 months</td>
</tr>
<tr>
<td>2018</td>
<td>59</td>
<td>F</td>
<td>NR</td>
<td>Face</td>
<td>ACD</td>
<td>Epidermal hyperplasia</td>
<td>Topical and systemic steroids.</td>
<td>6 months</td>
</tr>
<tr>
<td>2019</td>
<td>62</td>
<td>F</td>
<td>NR</td>
<td>Face</td>
<td>ACD</td>
<td>Epidermal hyperplasia</td>
<td>Topical and systemic steroids.</td>
<td>6 months</td>
</tr>
</tbody>
</table>

Discussion and Conclusions

Review of these cases show that while atypical, ACD and malignancies may initially masquerade as the other, potentially resulting in delay in necessary treatment. In the setting of a thorough history and physical, dermatologists should be aware of potential dermatologic mimickers including ACD and mycosis fungoides. Utilization of appropriate patch testing and skin biopsy will help guide the clinician to the correct diagnosis.

References