The Oncostatin M Receptor Beta Axis Identified in Prurigo Nodularis

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BACKGROUND

- Prurigo nodularis (PN) is a chronic skin disease characterized by intensely pruritic hyperkeratotic nodules
- The pathogenesis of PN is unclear but thought to involve neuronal sensitization, triggering a pruritus-scratch cycle that results in inflammation, hyperkeratosis, fibrosis, and ultimately nodules formation
- PN can be a high medical need, as the variable period, intense itching, and arising lesions lead to sleep loss, embarrassment, anxiety, and depression
- Currently, there are no approved treatments for PN

OBJECTIVE

- Objective was to determine whether the Oncostatin M receptor (OSMR) is upregulated in lesions of PN

METHODS

Design
- Eligible patients were adults ≥18 years old with a diagnosis of PN (new or established)
- Exclusion criteria were: age <18 years, pregnancy, breastfeeding, chemotherapy, or radiotherapy
- Blood sample and biopsy were collected

Biopsy and Plasma Samples
- Lesional (LS) and nonlesional (NL) skin biopsies and plasma samples were collected from PN patients

Assessments
- Meanings of IHC expression for OSM-α, OSM-β, and OSMR were measured by quantitative real-time polymerase chain reaction (qRT-PCR) using a TaqPath Low Density Assay
- The PN and AD biopsies were stained with the following antibodies

Analyses
- Weekly average Worst Itch Numeric Rating Scale (WI-NRS) values were calculated

RESULTS

- The mean number of biopsies was 15 ± 3 per patient
- The mean number of biopsies was 9 ± 4 per patient

CONCLUSIONS

- The OSM receptor (OSMR) is an increased in lesions of PN

REFERENCES

DISCLOSURES

ACKNOWLEDGMENTS

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Table 1. Demographics

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<th>Ethnicity, n (%)</th>
<th>PN</th>
<th>AD</th>
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<tbody>
<tr>
<td>Asian</td>
<td>13 (57)</td>
<td>13 (57)</td>
</tr>
<tr>
<td>African</td>
<td>15 (63)</td>
<td>10 (43)</td>
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<tr>
<td>Asian Pacific</td>
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<td>1 (4)</td>
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<tr>
<td>Hispanic</td>
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<tr>
<td>Other</td>
<td>3 (13)</td>
<td>2 (8)</td>
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<tr>
<td>Total</td>
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<td>25 (100)</td>
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