Different Biochemical Profiles in Inflammatory and Granulating Wounds

Joseph D. Raffetto MD
VA Boston HCS, West Roxbury, MA, Harvard Medical School, Boston, MA; Brigham and Women’s Hospital
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Inflammatory cytokine levels in chronic venous insufficiency ulcer tissue before and after compression therapy

<table>
<thead>
<tr>
<th>Cytokine</th>
<th>Before therapy</th>
<th>After therapy</th>
<th>T</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>IL-1α</td>
<td>8.00 (0.11)</td>
<td>0.59 (0.06)</td>
<td>0.49</td>
<td>0.01</td>
</tr>
<tr>
<td>IL-1β</td>
<td>3.77 (0.01)</td>
<td>0.55 (0.03)</td>
<td>0.49</td>
<td>0.01</td>
</tr>
<tr>
<td>IL-6</td>
<td>2.77 (0.01)</td>
<td>0.45 (0.04)</td>
<td>0.49</td>
<td>0.01</td>
</tr>
<tr>
<td>IL-8</td>
<td>0.27 (0.01)</td>
<td>0.01 (0.00)</td>
<td>0.49</td>
<td>0.01</td>
</tr>
<tr>
<td>G-CSF</td>
<td>1.43 (0.10)</td>
<td>0.05 (0.04)</td>
<td>0.49</td>
<td>0.01</td>
</tr>
<tr>
<td>TNFα</td>
<td>0.22 (0.01)</td>
<td>0.01 (0.00)</td>
<td>0.49</td>
<td>0.01</td>
</tr>
<tr>
<td>TGF-β1</td>
<td>2.46 (0.02)</td>
<td>0.94 (0.06)</td>
<td>0.49</td>
<td>0.01</td>
</tr>
</tbody>
</table>

Initial pro-inflammatory state followed by a decrease in cytokines and an increase in TGF-β1 after compression


Disclosures
Nothing to Disclose No Conflicts of Interest


Chronic venous disease – Part I: Inflammatory biomarkers in wound healing
Daniela Ligi, Giovanni Modini, Lidia Croce, Joseph D. Raffetto, Ferdinando Mannella

Chronic venous disease – Part II: Proteolytic biomarkers in wound healing
Daniela Ligi, Giovanni Modini, Lidia Croce, Joseph D. Raffetto, Ferdinando Mannella

- Evaluate CVUWF in two phases
  - Inflammatory (Infl, n=32)
  - Granulating (Gran, n=16)
- All patients with VLU (19M, 29F)
- Mean age 72 (43-91)
- Analysis of cytokines, chemokines, GF, MMP TIMP
- Multiplex immunoassay

Chronic Venous Insufficiency: Transforming Growth Factor-β Isoforms and Soluble Endoglin Concentration in Different States of Wound Healing

Non-Responder vs. Responder VLU: Cytokines and TAM/Ligands

- Increased cytokines in VLU over control
- Increased TAM/ligands in VLU over control
- Differences in responders vs. non-responders VLU

Conclusions

- Significant expression of cytokines/chemokines GF in VLU and wound fluid
- Cytokines and proteinase have different signatures within the healing state of a VLU
- Innate immunity involved in VLU inflammation and healing
- Potential for specific targeted therapy in VLU