Utilizing WIfI Classification for Patients with Threatened Lower Limbs

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Background
Critical limb ischemia (CLI) was first defined in publication in 1982.1 Twenty-two years later, the Society for Vascular Surgery Lower Extremity introduced a classification system incorporating three major factors contributing that impact amputation risk and clinical management: wound, ischemia, and infection (WIfI).2,3 Without intervention, CLI often implies poor outcome leading to amputation.1,2,3 Amputation risk and clinical management: wound, ischemia, and infection (WIfI). Classification system incorporating three major factors contributing that impact amputation risk and clinical management: wound, ischemia, and infection (WIfI).2,3

Purpose
Utilize WIfI system for clinical decision making and better analysis of outcomes.

Materials and Methods
- Single center
- Retrospective analysis in patients with diabetic foot ulcer, non-healing ulcer present for more than two weeks, gangrene, or ischemic rest pain

Results

Table 1: Demographics, clinical features, and symptoms

<table>
<thead>
<tr>
<th>Patient #</th>
<th>Age (years)</th>
<th>Gender</th>
<th>BMI</th>
<th>Diabetic</th>
<th>CVD</th>
<th>Smoker</th>
<th>Diabetes</th>
<th>CKD</th>
<th>AMD</th>
<th>Lesions</th>
<th>Angiography</th>
<th>Interventions</th>
<th>WIfI</th>
<th>Follow Up</th>
</tr>
</thead>
<tbody>
<tr>
<td>Patient #1</td>
<td>55</td>
<td>M</td>
<td>29</td>
<td>Yes</td>
<td>No</td>
<td>No</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Left (toe)</td>
<td>None</td>
<td>I &amp; D and Skin graft</td>
<td>W1I0F0</td>
<td>Non healing</td>
</tr>
<tr>
<td>Patient #2</td>
<td>77</td>
<td>M</td>
<td>25</td>
<td>Yes</td>
<td>No</td>
<td>No</td>
<td>Yes</td>
<td>No</td>
<td>No</td>
<td>Right (toe)</td>
<td>None</td>
<td>None</td>
<td>W2I0F0</td>
<td>None</td>
</tr>
<tr>
<td>Patient #3</td>
<td>65</td>
<td>M</td>
<td>26</td>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
<td>Yes</td>
<td>No</td>
<td>No</td>
<td>Right (brachial)</td>
<td>None</td>
<td>None</td>
<td>W3I0F0</td>
<td>None</td>
</tr>
<tr>
<td>Patient #4</td>
<td>63</td>
<td>M</td>
<td>24</td>
<td>Yes</td>
<td>No</td>
<td>No</td>
<td>Yes</td>
<td>No</td>
<td>No</td>
<td>Left (brachial)</td>
<td>None</td>
<td>None</td>
<td>W1I0F0</td>
<td>None</td>
</tr>
<tr>
<td>Patient #5</td>
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<td>M</td>
<td>25</td>
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<td>No</td>
<td>No</td>
<td>Yes</td>
<td>No</td>
<td>No</td>
<td>Right (brachial)</td>
<td>None</td>
<td>None</td>
<td>W2I0F0</td>
<td>None</td>
</tr>
</tbody>
</table>

Discussion
5 patients with a non-healing ulcer and symptoms of intermittent claudication had a mean age of 74.6. Three patients had diabetes and only one did not receive revascularization intervention. Four out of five patients had no complications. One patient underwent direct thrombolysis and angioplasty of graft for critical stenosis. Although intervention in 4 patients showed improvement in WIfI score, limitations have to be taken into account, such as the population size and the fact this study was conducted in a retrospective manner.

Conclusions
4/5 pts showed improvement in healing of ulcer and symptoms of intermittent claudication. With WIfI classification, we can make better clinical decisions factoring wound, ischemia and infection criteria. Also, the risk stratification is based on these three major factors that impact amputation risk and clinical management.

References

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