**Abstract**

Infection, sepsis, tissue necrosis and decreased blood volume are just some of the life-threatening factors to consider when treating severely burned patients. Electrical burns are much more common in young men but overall are a relatively rare pathology. For so many patients, amputations are a measure used to remove gangrenous and infected tissue thereby increasing the patients’ chance of survival.

**Background**

A 14 y.o. Caucasian male (aka patient X) with no PMH presents to the emergency department after suffering a fall resulting in partial and full thickness electrical burns covering >75% of his body. Upon admission, it was determined the majority of 3rd degree burns covered the distal extremities.

**Methodology**

A number of life-saving amputations were performed on patient X. Minor amputations include digits and major amputations comprise the loss of a limb or extremity as designated in Table I. Sections of the amputations were evaluated histologically to determine viability of the margin and confirm surgical rationale for limb removal. In this patient, minor amputations were often followed by removal of the entire extremity as the primary care team tried to preserve patient X’s functionality.

<table>
<thead>
<tr>
<th>Extremity Amputated</th>
<th>Cause of Amputations</th>
<th>Number of Amputations</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hand and Forearm</td>
<td>Necrosis</td>
<td>2</td>
</tr>
<tr>
<td>Foot and ankle</td>
<td>Infection</td>
<td>1</td>
</tr>
<tr>
<td>Toes</td>
<td>Necrosis; Trauma</td>
<td>3</td>
</tr>
</tbody>
</table>

**Hypothesis**

Utilizing amputations for severely burned patients can significantly decrease the overall surface area that is burned and therefore increase the survival rate of victims whose injuries can be removed rather than treated traditionally.

**Results**

In an effort to reduce irreversible damage, the necrotic limbs were removed shortly after admission to the emergency department as demonstrated in Figure II. A skin flap and fat pad was left for a prosthetic attachment during later recovery. The removal of these extremities awards the patient a higher probability of survival even though it resulted in permanent disability. The open wounds left patient X at risk for an infection and his foot was removed to prevent sepsis (figure III). Continued debridement of the wounds proved to be an effective treatment following the amputations. Patient X is anticipated to make a full recovery and is working with physical therapy to be fitted for numerous prosthetics.

**Conclusion**

- Amputations decrease the surface area of a patient, in burn victims this can change the percentage of the body that is damaged as demonstrated in figure I.
- Although a radical approach, amputations improve the survival odds of burn victims and can reduce recovery time.

**References**


