The Burn Pain Experience.

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The Burn Pain Experience
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BACKGROUND / INTRODUCTION

- This study aimed to evaluate the pain experience in patients who were treated by the Lehigh Valley Burn Unit.
- Burn pain is one of the most severe forms of acute pain (Prakash 2004).
- Pain Control within the first 48 hours foreshadows the amount of chronic pain post surgery (Andrews 2012).
- Burn pain is often treated with opioids.
  - Opioids reduce the signal transmission between neurons, this disrupts the pain response to the brain (Maani 2011).
- Many believe doctors are to blame for the opioid epidemic (Tello 2017).
  - (Physicians have to take the patients word for face value despite if they abuse opioids or not)
- It is hypothesized that patients who were on narcotic medication before the burn will provide a higher pain rating then those who don’t.

METHODS

- A questionnaire was given to 195 patients who were treated by LVHN Burn Unit.
- A Retrospective chart review was performed and the patients age, sex, total percent burn, burn wound depth, donor site, intubation, narcotic/ drug abuse history, narcotic naïve, and pain level as recorded by practitioners was recorded.
- Statistical analysis was performed on the results of the study the following was analyzed.

RESULTS

- The distribution of patients can be found below in table 1.

<table>
<thead>
<tr>
<th>Distribution</th>
<th>Number of Patients</th>
<th>Average Overall Pain</th>
</tr>
</thead>
<tbody>
<tr>
<td>In Patient</td>
<td>87</td>
<td>4.941176471</td>
</tr>
<tr>
<td>Out Patient</td>
<td>90</td>
<td>6.03125</td>
</tr>
<tr>
<td>Pediatrics</td>
<td>17</td>
<td>2.875</td>
</tr>
<tr>
<td>Males</td>
<td>136</td>
<td>4.538461538</td>
</tr>
<tr>
<td>Females</td>
<td>58</td>
<td>4.979166667</td>
</tr>
</tbody>
</table>

- Patients who abuse narcotic drugs had higher pain levels throughout their first 24 hours after the burn.
  - At 24 hours the differences between the two groups became significant (p-value = 0.019).
- Non narcotic naïve males had a higher pain rating than females.
- Narcotic naïve females had a higher pain rating than males.
- Patients remembered their pain at a higher level then they reported in the hospital.
  - The difference between reported pain levels was significant (p-value = 0.0085).

DISCUSSION

- Patients who abuse narcotics tend to have a higher pain level than those who take narcotics as they were prescribed.
  - It is common for a patient to feel as though they need to take more than the recommended amount in order to obtain the same effect that they once got when they first began taking the medication, over time they find that they need to take more just to feel normal (Tello 2017).
- Studies show a sex difference in opioid binding, females tend to have higher binding potential during reproductive years, after that females have a lower opioid binding potential then males (Zubieta 1999).

CONCLUSION

- The data collected supports the hypothesis that patients who take narcotics have a higher pain level than those who do not.
- Further research needs to be done to gain a better understanding as to how to treat pain in patients who take narcotics, no research currently exists.