

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 than those who don't.



METHODS

- A questionnaire was given to 195 patients who were treated by LVHN Burn Unit.

At the time when the burn first happened my pain level was:
1 2 3 4 5 6 7 8 9 10

During my initial 2-6 hours in the Emergency department and/or during transport from another hospital my pain level was:
1 2 3 4 5 6 7 8 9 10

During my first dressing after the accident my pain level was:
1 2 3 4 5 6 7 8 9 10

During my first 24 hours on the burn service my average pain level was:
1 2 3 4 5 6 7 8 9 10

Was the pain medicine enough to help alleviate your overall pain while in the hospital?
Yes No

Would you have preferred to have more pain medicine while in the hospital?
Yes No

Would you have preferred to have anesthesia with each procedure or dressing change?
Yes No

Figure 1. Example questions from the questionnaire given to both in patients and out patients.

- 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.

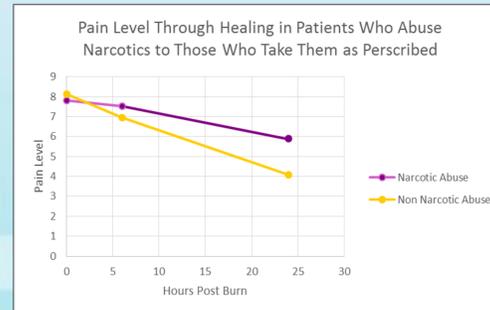


Figure 2. Average pain rating after 0, 6, and 24 hours post burn, comparing patients who were on narcotic pain medication before being treated at the burn center. P-value at 24 hours was 0.019.

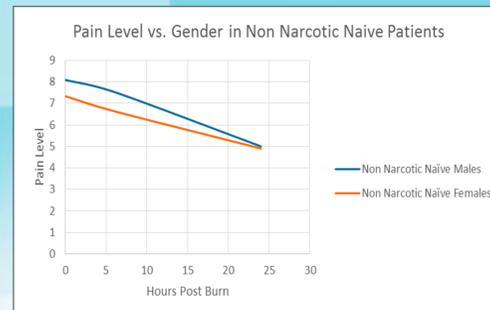


Figure 3. Average pain rating between males and females after 0, 6, and 24 hours post burn. Females on average, reported a lower pain level throughout healing when compared to males.

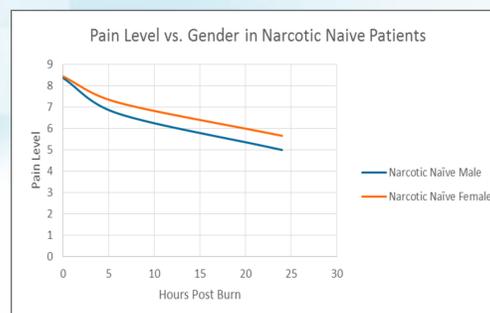


Figure 4. Average pain rating between males and females after 0, 6, and 24 hours post burn. Females on average reported a higher pain level throughout healing when compared to males.

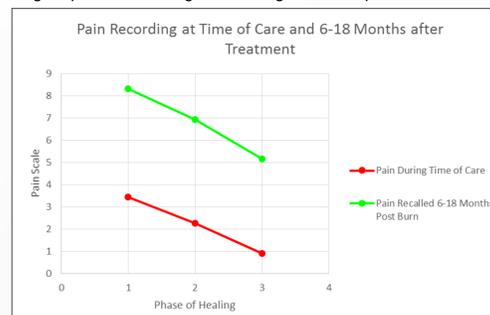


Figure 5. Average pain at beginning, middle, and end of treatment; recorded at the time of stay and 6-18 months after treatment. Recorded p-value was 0.0085.

RESULTS

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

Table 1. Distribution of the patients treated in the burn unit along with the average overall pain rating.

Distribution	Number of Patients	Average Overall Pain
In Patient	87	4.941176471
Out Patient	90	6.03125
Pediatrics	17	2.875
Males	136	4.538461538
Females	58	4.979166667

Table 2. Basic Definitions for terms used in presentation.

Term	Definition
Narcotic Tolerance	When an individual needs greater amounts of a drug to get the desired effect.
Narcotic Addiction	Chronic relapsing brain disease resulting in compulsive drug seeking.
Narcotic Naïve	Patients who are not currently taking narcotics on a daily basis.
Non Narcotic Naïve	Patients who are currently taking narcotics on a daily basis.
Narcotic Abuse	When an individual uses narcotics even though they are hurting themselves or others.

- 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 than 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 than 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. © 2017 Lehigh Valley Health Network