Results: The sample characteristics included: mean age of 3.1 + 1.4 years, mean time since burn injury of 1.2 + 1.3 years, mean TBSA of 4.2 + 7.9, 55.2% male, and 74.2% white. In the multiple logistic regression analyses, burn survivors with severe pain had significant trouble falling asleep (OR = 0.44, 95% CI [0.24, 0.81]) and staying asleep at night (OR = 0.45, 95% CI [0.24, 0.83]). No association was found with pain severity and frightening dreams or nightmares (OR = 0.8, 95% CI (0.37, 1.75). The multiple linear regression analysis showed that higher scores on pain scales were associated with poor sleep outcomes (R^2= 9.5%, $\boldsymbol{p}$ = 0.0016). As pain scores increased, the sleep summed score decreased by 0.46 standard deviation.

Conclusions: There are important associations between pain severity and sleep outcomes. Pain management and interventions for sleep improvement may lead to better outcomes in the pediatric burn population.

26 Opioid Prescription in Burns: A Large Database Analysis from 1990 to 2021

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Introduction: The use of opioids in the medical field has contributed to the growing opioid epidemic. Nonetheless, opioids remain imperative in the treatment for pain management in burns. While some studies have addressed the use of opioids in surgery, a comprehensive analysis of the pattern of opioids use in burns has not been investigated. This study aims to identify trends of opioid use and investigate the risk of opioid related disorders in burn patients.

Methods: Data was obtained from TriNetX, a national research database that provides medical records of de-identified patients. The study population includes patients that were prescribed an opioid, ICD-10 code CN101, on or after any instance of burn between January 1st, 1990 and September 19th, 2021. Patient population was further stratified by the decade in which patients received opioids for pain following burn injury: 1990-1999, 2000-2009, 2010-2019, and 2020-September 19th, 2021. Five outcomes were investigated: opioid related disorders, opioid dependence, opioid abuse, intentional self-harm, and mental and behavioral disorders due to psychoactive substance use. Cohorts were matched for age at index, sex, and race. Statistical analysis used risk ratios with a 95% confidence interval, and p< 0.05 was considered significant.

Results: We identified 8,421 patients that were prescribed an opioid between 1990-1999, 30,846 patients from 2000-2009, 169,991 patients from 2010-2019, and 3 0,966 patients from 2020-present. When compared to the 2000s cohorts, the 1990s patients had a 47% decrease in risk of opioid related disorders, with a 53% decrease in risk of opioid dependence, 45% decrease in risk in opioid abuse, 11% decrease in risk of mental and behavioral disorders due to psychoactive substance use, and 63% reduced risk of intentional self-harm.

Comparison of the 2000-2009 to 2010-2019 cohorts showed increased risk of opioid related disorders (RR= 1.912), opioid dependence (RR=1.569), opioid abuse (RR=1.677), mental and behavioral disorders (RR =1.733), and intentional

self-harm (RR=2.027). When compared to 2020-present, the 2010-2019 patient cohort had 10 times the risk of developing opioid-related disorders, with 3 times the risk for opioid dependence and behavioral disorders, and 5 times the risk for opioid abuse and intentional self-harm.
Conclusions: The risk of opioid related disorders in the 1990s was lower compared to the 2000s. Since 2000, the risk of opioid related disorders has significantly increased. Recognizing the risks of opioid prescriptions in burn patients is imperative when addressing the role of physicians in controlling the constantly growing opioid epidemic.

27 Pain Medication Use at Follow up Is Associated with Long-term Outcomes

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Introduction: Use of prescription pain medication after burn injury is commonly required. However, little is known about long-term pain medication use and its association with outcomes. Therefore, the purpose of this study is to assess patterns of prescription pain medication use after discharge and the association between these medications and quality of life outcomes.
Methods: Data from the Burn Model System National Longitudinal Database (2015-2021) were analyzed. Pain medication use was assessed at pre-injury (recall at discharge), discharge (medical record) and follow-up (self-report at 6, 12, and 24 months after injury). Outcome measures included: VR-12 Physical and Mental Component Summary scores (PCS and MCS), Community Integration Questionnaire (CIQ), Posttraumatic Stress Disorder Checklist (PCL), Satisfaction with Life Scale (SWLS), and NeuroQOL Stigma. The population was divided into two groups, those taking and not taking prescription pain medications at one year. Regression analyses examined associations between prescription pain medication use and outcomes at 12 months, controlling for age, gender, race, ethnicity and burn size.
Results: Of the 645 participants, 15% reported prescription pain medication use prior to their burn. At discharge, 81% reported use of an opioid and 46% reported use of a neuropathic pain medication. At 12 months, 32% of individuals indicated prescription pain medication use. The pain medication group exhibited larger burn size (24.0% vs 15.2%) and longer hospital stays (40.4 vs 25.0 days) than the non-pain medication group ($p< 0.0001$ for all). Additionally, 25% of individuals who reported pre-injury pain medication use also reported use at 12 months. Regression analyses demonstrated that pain medication use was associated with worse physical health (PCS: coefficient 8.69, $p< 0.0001$) mental health (MCS: 6.31, $p< 0.0001$), stigma (NeuroQOL Stigma: 3.91, $p< 0.0001$), and satisfaction with life (SWLS: -3.66, $p< 0.0001$) at one year. Additionally, pain medication use was associated with 45% decreased odds of being employed (coefficient 0.55, $p=0.029$) and approximately 3 times greater odds of having post-traumatic stress disorder at 12 months (coefficient 3.25, $p< 0.0001$).
Conclusions: There are significant associations between prescription pain medication use and worse physical, mental and employment outcomes at twelve months. This information may be used to trigger screening and manage long-term recovery outcomes.