

Opioid Addiction and Its Effect on Oral Health

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Research Question

Are people who suffer from an opioid addiction at an increased risk for tooth decay even if they are in recovery?

Abstract

Opioid addiction in this nation is an extremely prevalent public health crisis. The same can be said about dental caries and other oral health conditions. Research shows that opioid addiction and dental caries have a strong correlation, even former opioid addicts are more likely to have caries. It is clear there are harmful effects of opioid abuse on our oral cavity. The hope is that in the future, more research will be conducted to truly understand the scientific effects of opioid abuse on oral health and caries.

Introduction

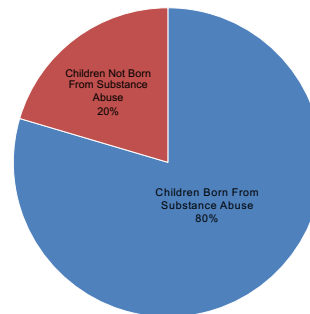
- Three million US citizens and 16 million individuals worldwide have had or currently suffer from opioid use disorder (OUD)¹.
- Opioids have been proven to have a high abuse potential, which is why this disease can have such a detrimental effect on the American population. In 2017, opioid overdose was declared a national emergency in the United States.²
- Not only do these potent synthetic drugs cause significant alterations to the body, they also cause irreversible damage to parts of the body that most people don't expect—such as the oral cavity.³
- Numerous institutions and research centers have aided in identifying the impacts of substance abuse and how they correlate with periodontal disease, tooth loss, decay rate and many other repercussions and ramifications pertaining to opioid use disorder and the oral cavity.⁴

Review of Literature

- The effects of opioid use has an overall effect on both oral and systemic health. Research has shown the correlation between drug use and factors such as reported tooth loss, periodontal disease, or decayed, missing, and filled teeth index (DMFT).^{4,5}
- Fifty-four studies were evaluated and it was shown that the type of drug used increased the number of DMFT by 95%.^{4,5}
- Children also suffer from opioid abuse through parents abusing while the child is in utero.³
- Research indicates that HURE groups (historically underrepresented racial/ethnic groups) face tremendous substance abuse disorder and oral health inequalities.²

Figure 1: Children Hospitalized for Caries

Children Hospitalized for Caries



Every year 10,000 people are hospitalized for caries. This graph represents that children born from substance abuse are three times more likely to be hospitalized for caries than those not born from substance abuse.³

Discussion

- There is enough evidence to propose that opioids act as a potential risk factor for tooth decay.
- Important to understand the long-term side effects of these drugs.
- Limitations of the research:
 - Research from outside of America
 - Research completed on a specific gender, race, or populations
- Suggestions for future research:
 - It would be useful to conduct a long-term study of caries forming during and after substance use.
 - Future studies could sample dental caries and see if there are traces of opioid by-products within the genetic makeup of the dental caries.

Conclusion

It has been determined that there is a strong correlation between dental caries and opioid abuse regarding the decay factor of opioids and the side effects that follow. However, there is still further research to be done to declare the two have a significant correlation. The research that has been conducted thus far has shown opioid abuse has a correlation with tooth decay. Studies still need to be executed on tooth decay before and after substance abuse, along with the genetic makeup of dental caries after opioid abuse.

References

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